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## Political Economy.

### MR. WOODBURY'S REPORT TO THE SENATE OF THE UNITED STATES.

TREASURY DEPARTMENT, *January* 1, 1841.

SIR: I have the honor to submit the following report, in compliance with the first branch of a resolution which passed the Senate on the 16th instant, in these words:

"*Resolved*, That the Secretary of the Treasury be directed to communicate to the Senate the plan of a permanent change in the tariff; the details and general principles of which he states, in his annual report of the 7th ultimo, he has considered, and on which he is ready to report at any moment either House of Congress might express a wish to that effect."

Foreseeing, in my annual report of December, 1839, that the subject of a revision of the present tariff might be safely postponed, I then stated that it was not my intention to examine it at that time, being "a topic involving considerations of so difficult and agitating a character." But, as some of the Committee on Manufactures afterwards expressed a wish for a plan of such a revision, to be prepared by the session of 1840 and 1841, and as the large reduction which is to take place in the duties at the close of this year, and of June, 1842, appeared in the view of many to render such a revision imperative as a fiscal measure before those times arrived, I deemed it a duty, for these and the reasons mentioned in my last annual report, to make the preparations expected, so that a system might be in readiness for the consideration of the committee, or Congress, should it appear to them that the public interests required action on the subject at the present session.

A call being now made for it by the Senate, and supposing, from the language used, and the advanced period of the session, that an early reply is desired, I submit, without material alteration, the plan referred to, with its "details and general principles."

It is believed that the reduction in the duties on imports which, by the existing tariff, will take place in the year 1842, cannot vary much from five millions of dollars. For reasons assigned in the last two annual reports on the finances, the expectations of the undersigned are, that, if the expenditures are properly and seasonably diminished, it will not be necessary to raise all this amount by taxation in any form. But should Congress think differently, and conclude to obtain it by revising the present laws in relation to duties, it is believed that certain facts and principles are highly important for consideration in deciding what kind of a revision is competent and most appropriate. In stating these facts and principles, with a view to explain the plan called for by the resolution, all possible brevity, consistent with the importance of the subject, will be employed.

The chief legislation which now exists in force, bearing on this inquiry, is contained in an act passed March 2d, 1833. That act is supposed to have been not an ordinary measure of legislation, but the result of a compromise between certain great and conflicting interests on the difficulties then involved in the agitating matter of the tariff. Hence, though the act was in the form of a law, and therefore liable, in a proper case, to any future modification or repeal of its provisions, it is understood that the parties most concerned contemplated thereby a permanent arrangement of the leading principles that should afterwards control the whole subject. The importance of the emergency which occasioned the passage of the law, the distinguished individuals who participated more immediately in adjusting its provisions, and the salutary influence of their operation up to the present time, in imparting a degree of stability to our manufacturing enterprise, sought in vain through the previous fluctuations of legislation, have probably contributed to strengthen this impression.

But, however that fact may have been, and subject to subsequent alterations, as all laws must probably be considered; yet, to change the limitations in this one, so peculiarly situated, and to do it against the wishes of persons most interested, or without the apology of some public exigency or necessity of state, would surely seem to be unnecessary, and, at least, of doubtful propriety.

Hence, at this period of peace abroad, of tranquillity at home, of great exemption from public debt, and of unquestionable ability to raise ample revenue, without encroaching upon the plain import of the compromise, the undersigned cannot hesitate, while considering what would be the most appropriate revision of the tariff for the wants of 1842, to recommend one which shall not violate the stipulations contained in that compromise. What, then, are those stipulations or restrictions?

1. The first seems to be, that a reduction, by installments, of the former rate of duties, when exceeding twenty per cent, should forthwith commence, and continue uninterrupted until July 1st, 1842; so that when that period arrives, no duties whatever should exceed twenty per cent. The leading section of the act is explicit upon this point. Hence, to defer or repeal, as some have proposed, the two reductions now remaining, and which are to take effect in 1842, would keep many duties higher than twenty per cent, and thus be in direct violation of this general provision. But if these last reductions should create a deficiency in the revenue, the 6th section of the act would allow it to be supplied in a different way; because this section provides that, in such an event, nothing contained in the law shall prevent "altering the rates of duty on articles which, by the aforesaid acts of 14th July, 1832, are subject to a less duty than twenty per cent."

2. It will be seen, however, that this provision contains a second restriction, by limiting any revision made before 1842, for an increase of the tariff, to only such articles as pay a less duty than twenty per cent.

3. The next and third restriction on a revision, is, that though one may be made before 1842, for purposes of revenue, if, when increasing the duties, it be confined to articles paying less than twenty per cent; yet it should not raise the tariff on those above that rate, even for revenue—much less, probably, for any other purpose. The close of the 6th section seems to be express, that the duty on articles paying a less rate than twenty per cent, if changed before 1842, shall be altered "in such manner as *not* to exceed that rate."

What would be deemed the proper disposition of this limitation, if a duty of twenty per cent, on all imports would not yield sufficient for the legitimate purposes of revenue, must be settled when the case shall arise. But it is believed that, with proper economy, there is no likelihood of such a case ever occurring in a period of peace.

4. Another restriction supposed to have been intended, is, that if a revision be made to operate after June 30, 1842, instead of before, still, as a general rule, none of the duties shall be then raised above twenty per cent. Thus the close of the 5th section provides that "all imports, on which the 1st section of this act may operate, and all articles now admitted to entry free from duty, or paying a less rate of duty than twenty per cent, ad valorem, before the said 30th of June, 1842, from and after that day may be admitted to entry, subject to such duty, *not exceeding* twenty per cent, *ad valorem*, as shall be provided by law." A change could then be made at pleasure, from twenty per cent downwards, to entire freedom from any impost; but no increase was to be permitted to go above that rate. Indeed, the inference would seem to be, that the compromise was intended to prevent any duties from being assessed even after 1842, exclusively for the purpose of distribution, or protection, whether below or above twenty per cent in amount; because a clause in the 3d section provides that, after 1842, "duties shall be laid for the purpose of raising such *revenue* as may be necessary to an *economical* administration of the Government," but is silent as to recognizing or sanctioning an authority to do it for any other purpose. The raising such a revenue was the great object of granting any power in the constitution to lay taxes and imposts. And it would be difficult to find in a limited grant of powers, like what is contained in that instrument for laying imposts, a warrant to impose them for other and distinct objects; and especially if the operation of such a measure, apparently under an assumed authority, and on a subject so delicate and momentous to mankind as taxation, should tend to enrich particular classes or sections, at the expense of others. In truth, the tariff is as much a system of taxation as a land tax, a stamp tax, or a direct tax of any kind; and is chiefly distinguishable from them, by being more subtle and less obnoxious in its form. The confining of all duties, hereafter, to a low rate, was, therefore, desirable to the great mass of the people, because it was confining taxes to a low rate. It was further supposed, without doubt, that, though comparatively low, they would yield, with the other ordinary receipts, an ample supply of revenue for such an "economical administration" as is contemplated by this section of the act.

It is also probable that many sound principles of political economy, and a mutual desire to arrange permanently the tariff controversy, united to persuade Congress not only to reduce the duties lower, but to provide that they should always be kept lower. It must have been foreseen that this would avoid the useless vacillation, if not folly, of first diminishing all the duties to twenty per cent by 1842, with a view, afterwards, of again immediately raising them above it. It was obvious, too, that by keeping the imposts more reduced, the tariff would operate more advantageously to free trade, and the procurement of reciprocal favors abroad. By confining, in substance, any future change to purposes of revenue alone, and within twenty per cent, instead of a wide range of thirty, fifty, eighty, and even more, at times previously in practice, and frequently for protection, it would likewise impart greater permanency and prosperity even to manufacturing, and with that, to all other descriptions of industry. It is well known, from recent experience, that such stability in our system of duties would be better for the manufacturer, as well as the merchant and the community at large, than even a higher rate, exposed to constant changes; because in the former case, intelligence and foresight could make more accurate calculations for the future; a more uniform thrift, a more regular reward to industry, and a higher tone of moral feeling, would everywhere take the place of constant fluctuations, mere gambling speculations, and a dangerous overaction from renewed hopes of high profits, often so very fallacious. Business and the currency would then be steady, and be regulated, as they should be, rather by the great laws of trade, than by banks or politicians. Nor is this permanency injurious to the laborer and artizan, any more than to others, as all trades and regions of this country are open to enterprise; and a larger share here than abroad, of the income in any one branch of business, must and should uniformly go to wages rather than capital, or the workman will, under our free institutions, quit it for more lucrative employment. On the contrary, if an unusually large share go to him for a time, in any particular pursuit or place, others will soon rush in, participate, and reduce it, by competition, even below the average. Uniformity and steadiness are, therefore, not injurious to any, though engaged in labor or manufactures; but useful to all, except the mere speculating classes.

Two other restrictions exist in the 3d section of the compromise act, which seem to have been intended more especially for the benefit of the manufacturers and of the revenue.

5. One is, that after June, 1842, "all duties on imports shall be collected in ready money; and all credits now allowed by law, in the payment of duties, shall be, and hereby are abolished." This was regarded, at that time, as a change likely to be very favorable to the manufacturing class, by making the twenty per cent in cash operate, virtually, as a higher protection than twenty per cent on a credit (as now) of three and six months without interest. In point of fact, it was also, a provision prophetic as to evils to come under an excessive credit system; and will be possessed of much importance in curing them, and in securing the Government, and, through it, the community at large, against losses by credit to merchants, for duties, and by defaults of collectors, district attorneys and marshals, caused by indulgence from them in collecting bonds for duties. After June, 1842, the importers of goods will, in this respect, stand on the same foundation with the purchasers of public lands. While no complaint can then be made by either, of favor or discrimination, the revenue will thus be rendered much safer, and public and private morality improved, by the removal of one great source of speculation and bankruptcy.

6. The other restraint requires the duty, after 1842, to be imposed on the value of the merchandize "*at the port where the same shall be entered*." This will render the 20 per cent still more important to both the manufacturers and the revenue, by being more secure against frauds and evasions, and being another virtual increase of duty on the same articles, as the latter are usually worth much more here than abroad. Whether the value of them here being not uniform at different ports, would, if taken as the guide in assessing the duty, be justly open to any constitutional objection, it is not deemed appropriate on this occasion to discuss. From these various considerations, the following deductions are made:

That the present tariff laws should be as little disturbed by any revision as possible, consistent with the public wants, and an adherence to sound principles; that changes should be made chiefly, if not solely for purposes of revenue; that these changes, when raising the duty, whether operating before or after July 1, 1842, should, as a general rule, be confined to articles not paying a duty as high as twenty per cent; that, except in extreme cases, it should never raise them above that rate; and, lastly, that the existing provisions for the payment of duties in cash, and the assessment of them, on the value of the merchandise at the port of entry, after 1842, are too important to be disregarded.

A principle deemed useful in carrying out these views, is this; In raising the sum needed, if it does not become necessary to subject all free articles to a duty, or to one as high as twenty per cent, and a discrimination can there-

fore be indulged, within the restrictions of the compromise act, it is doubtless a sound axiom to select for highest taxation articles of luxury, rather than of necessity: Under similar circumstances, it is also not only competent, but expedient, to select such of the former as compete most with similar articles of American growth or manufacture, though not to raise the duty on them above the limitation of twenty per cent. And another discrimination, sometimes useful, might be, to select those articles, in certain cases, for an increased impost, not usually exceeding the same limitation, which may be proper for countervailing injurious imposts placed on our own productions by any foreign power. The broad and well settled ground on which these distinctions rest, cannot require on this occasion much detailed illustration; for the luxuries of life are enjoyed by the few, rather than the many—the rich, instead of the poor; and their use tends rather to effeminacy and pleasure, than to what invigorates or makes useful. In a form of government like ours, these principles apply with peculiar force, as an excessive indulgence in luxuries always operates as the bane to republican manners, and, in time, to republican principles. On the contrary, articles of universal use, and considered as the necessaries of life, are beneficial to all, and are to be cheapened as much as possible, to promote the comforts of all. So, what is American may well be supposed entitled to receive, within the limitations stipulated, more incidental favor than what is foreign, because obtained with more readiness and certainty, as well as being more safe and independent in its use. Nor can any other country complain, with justice, if we counteract its high taxation on any of our products, by imposing some corresponding imposts on theirs; and however unprofitable such conflicts usually prove to all concerned, yet, when such a measure becomes convenient for our own fiscal purposes, or is required by proper self-respect, and is kept within due restrictions as to the amount of duty, it is believed to be entirely justifiable.

The present tariff is, in many of these respects, an anomaly. Being designed to get rid of revenue when it was too abundant, and to diminish a supposed protection to manufactures, deemed unreasonably high, as well as to establish certain general rules for keeping all duties lower in future, it sometimes omitted to make useful discriminations, and, as a system, does not sufficiently discountenance luxuries, or favor the necessaries of life. Indeed, the former have already become free in many cases, and in others will be taxed lightly, under the reduction now in progress; while the latter, though at the expense of the consumer, however poor, will, in almost every instance, bear as high if not a higher burden, than the greatest superfluity. In proposing a plan to raise the sum desired, one cardinal object is therefore, to obtain the money in a manner that shall not prolong any improprieties or incongruities in principle. And another is, to do it, and still preserve faithfully the limitations and stipulations of the compromise, as before explained. To furnish some data for practical legislation, which may accomplish these designs harmoniously, two tabular statements have been prepared, which will next be briefly explained.

The first one gives the names and value of all free articles imported into the United States in A. D. 1838, after deducting such of them as were exported. (See A.) Taking the imports of that year as a guide, (and perhaps nearer an average for some time to come than any other, though probably too low,) and the value of all the free articles—excluding, of course, specie, and the amount of others re-exported—would be about $38,161,583.

A duty on these, indiscriminately, of fifteen per cent, would yield a net revenue not far from the five millions that may be needed in 1842. But this would embrace several articles, which, under the principles before suggested, might judiciously be left free, or at a lower rate of duty than fifteen per cent. Another mode of raising the same amount of revenue would therefore be preferable, if it could be accomplished without including those articles. Suppose, then, that there should be selected from the free articles, those which may be regarded most as luxuries, though not in every respect belonging exclusively to that class—such are tea, coffee, and silks: should we then add to them others, conflicting with similar American productions, such as worsteds, linens, &c.; and the aggregate, deducting the amount re-exported, would be $29,026,448. (See the second table, B.) A duty of twenty per cent, on those, after paying the expenses of collection, would yield about the same amount of five millions. This seems to contain the general data for the most eligible and unexceptionable revision. If a less sum than five millions should prove to be needed, (as it is presumed will be the case, under the diminished expenditures and increased importations, anticipated and explained in the recent annual report on the finances, as well as from the further augmentation of revenue likely to happen from the new mode of assessing the value of merchandise,) any suitable modifications can be made in these details, without departing from the principles believed to be the most appropriate to govern the subject.

So some articles of luxury, not now free, but paying a less duty than fifteen or twenty per cent, might very properly be taxed to that extent; and some necessaries of life so situated might be made free, or be taxed lower, instead of them. Among the former, may be mentioned *wines;* though when any of them cannot, at present, be made to pay an additional duty, without violating some treaty stipulation, they should of course be exempted during the period agreed upon. Where any articles appear, also, to require an increased impost, merely as a countervailing measure, such a one could be imposed, without materially changing the general result as to revenue, if the increase were not made otherwise exceptionable, by exceeding the limitations in the compromise. Nor will difficulty probably exist, in any event, in permitting what is so very desirable—that some of the articles of necessity which, by the present laws, will after 1842 still pay a duty of twenty per cent, should be then exempted from all or a part of it. But, whatever plan may in the end be approved, it is apprehended that enough has been stated to explain the details of the one now offered, as well as the limitations and principles which ought, in the opinion of the undersigned, to govern all legislation on the subject. Nothing further will therefore be added, as to any measure to be adopted for relief in 1842, except that half the amount of increased duty should be made to accrue only from the 1st of January in that year, and the residue commence the 1st of July after; as those are the periods when the great future reductions begin, which the new duties are intended to supply.

In connexion with a permanent revision of the tariff, if made in the manner here recommended, it would be proper, under a plan of cash duties for all imports, to enlarge the liberty now enjoyed for depositing goods for a time in public stores.

Indeed, the warehousing system, which exists in some other countries, might, in that event, be usefully revised, and, so far as the new circumstances required, be adopted here.

As the higher classes of duties which exist under the present laws will all be reduced in 1842, so as virtually not to exceed an impost of twenty per cent on the value of the merchandise imported, it might also be expedient to provide for the assessment of the whole of them afterwards, on the *ad valorem* principle. At the same time, if not done previously, some of the large drawbacks and bounties now allowed could be regulated with more justice and with much benefit to the revenue, by reducing them so as to correspond in their proportions with the reduced duties.

Some other particulars might be suggested in connexion with a general and permanent revision of the tariff. But they are of such a character as to occur readily to all familiar with the subject; and, after the length to which this report has already extended, it is not deemed necessary to prolong it further, by an enumeration and explanation of them.

The other branch of the resolution, in respect to the new mode of valuing the imports, will be answered at the earliest day practicable. Respectfully,

LEVI WOODBURY, *Secretary of the Treasury.*

Hon. R. M. JOHNSON,
*President of the Senate of the United States.*

(A.)

VALUE OF MERCHANDISE FREE OF DUTY CONSUMED IN 1838.

| *Species of Merchandise.* | *Value.* |
|---|---|
| Articles for the use of the United States, | $3,316 |
| Philosophical apparatus, specially imported for philosophical societies, colleges, schools, &c. | 11,629 |
| Books, maps and charts, for ditto, | 21,394 |
| Statuary, busts, casts, &c. for ditto, | 3,086 |
| Paintings, etchings, and engravings, | 5,768 |
| Botany, specimens of, | 7,209 |
| Antimony, regulus of, | 3,346 |
| Spelter, or zinc, | 68,525 |
| Burr-stones, unwrought, | 27,999 |
| Brimstone and sulphur, | 34,466 |
| Bark of the cork tree, | 3,467 |
| Clay, unwrought, | 4,421 |
| Rags of all kinds, | 466,448 |
| Furs, undressed, | 300,045 |
| Hides and skins, | 1,940,326 |
| Plaster of Paris, | 131,876 |
| Barilla, | 82,196 |
| Wood, dye, | 82,196 |
| unmanufactured, | 282,702 |
| Animals, for breed, | 26,377 |
| all other, | 160,219 |
| Pewter, old, | 923 |
| Tin, in pigs and bars, | 128,935 |
| in plates and sheets, | 988,543 |
| Brass, in pigs and bars, | 38,006 |
| old | 1,696 |
| Copper, in pigs and bars, | 812,170 |
| in plates and sheets, for sheathing, | 526,792 |
| old, | 78,590 |
| Bullion, gold, | 230,694 |
| silver, | 390,343 |
| Specie, gold, | 10,703,926 |
| silver, | 3,387,048 |
| Teas, | 2,859,246 |
| Coffee, | 7,138,010 |
| Cocoa, | |
| Fruits, almonds, | 47,299 |
| currants, | 22,117 |
| prunes, | 7,996 |
| figs, | 33,453 |
| raisins, | 462,117 |
| Spice, mace, | 7,032 |
| nutmegs, | 51,207 |
| cinnamon, | 26,406 |
| cloves, | 21,989 |
| pepper, | |
| pimento, | 18,657 |
| cassia, | 23,219 |
| ginger, | 1,735 |
| Camphor, | |
| Silks, lace veils, shawls, shades, &c., | 156,034 |
| other manufactures of, | 7,807,343 |
| Silk and worsted goods, | 1,529,154 |
| Camlets of camel's hair, &c., | 89,032 |
| Worsted stuff goods, | 3,878,941 |
| Linens, bleached and unbleached, &c. | 3,098,557 |
| Ticklenburgs, osnaburgs, and burlaps, | 333,024 |
| Sheetings, brown and white, | 148,554 |
| Bolting-cloths, | 26,528 |
| Wool, costing less than 8 cents per lb., | 438,669 |
| Quicksilver, | 86,746 |
| Opium, | 67,073 |
| Crude saltpetre, | 119,606 |
| All other articles, | 3,854,966 |
| | $82,967,280 |
| Deduct excess of exports over imports: | |
| On dye-wood, | $15,533 |
| cocoa, | 52,946 |
| camphor, | 15,183 |
| Excess of value on pepper, | 9,994 |
| | 93,656 |
| | $82,873,594 |
| Deduct specie, | 14,712,011 |
| Balance consumed, | $38,161,583 |

(B.)

SELECTION OF CERTAIN FREE ARTICLES CONSUMED IN 1838.

| | |
|---|---|
| Silk, and manufactures of, | $7,897,343 |
| Silk and worsted, | 1,620,154 |
| Worsted stuffs, | 3,878,941 |
| Linens, bleached, &c., | 3,098,557 |
| Ticklenburgs, &c., | 333,024 |
| Sheetings, | 148,554 |
| Bolting-cloths, | 26,528 |
| Wool, under 8 cents per pound, | 438,669 |
| Crude saltpetre, | 119,606 |
| Animals, (not for breed) | 180,219 |
| Furs, (undressed) | 300,045 |
| Coffee, | 7,138,010 |
| Tea, | 2,859,246 |
| Copper, in pigs, | 812,170 |
| sheeting, | 526,792 |
| old, | 78,590 |
| | $29,026,448 |

[For the Northern Light.]

## ON THE PRUSSIAN TARIFF.

BY J. LOUIS TELLKAMPF.

PREVIOUS to the adoption of the Prussian tariff by the States forming the commercial league called the Germanic Union, each State followed its own policy, and consequently continually interrupted the commerce of the interior by custom-houses placed at its boundaries, to the great disadvantage of those occupied in that branch of industry, and as a natural consequence, goods were smuggled into the interior through the northern States, whose ports were left free for such importations. Moreover, the English, on account of their great facilities for manufacturing, could afford to undersell, and, therefore, monopolize that market, to the material injury of German *manufactures;* while they opened their market for the *agricultural* products of Germany only when in want, and as soon as supplied immediately closed it. Thus the investments of the Germans in manufactures, were sometimes profitable, and at others the reverse; and as no branch of industry suffers alone, commerce suffered with it; all which had the effect to compel many of the capitalists to invest their funds in other countries.

In order to counteract these disadvantages, and to employ at home this emigrating capital, and thereby increase the home market for their agricultural products, the Prussian government in this case, as in many others of general interest, taking the lead, adopted a tariff for the protection of those manufactures which are natural to the country, in order to enable them to compete with those of other countries. Soon many other States united with her, among which are Saxony, Bavaria, Wurtemberg, and others; and they divided the revenue among the whole according to their population respectively. The first mentioned, Saxony, had advanced to a high degree of perfection in her manufactures; notwithstanding this fact, Prussia, which had a higher tariff, in uniting with her, sacrificed some temporary interests by offering her market for the manufactured products of Saxony. It will be seen from a "Report of the Select Committee of the House of Commons on import duties," 1840, page 5, "that Saxony is a proof that manufactories can grow without much protection." This is very true, and it will be a safe rule for other States, provided they possess similar advantages—advantages which are not stated, but which consist in being supplied at home and by the neighboring States with the raw materials in the highest perfection and abundance for her manufactories, with ample food for the numerous and industrious population, whose manual labor is consequently cheap. These *natural* advantages enable Saxony to compete with other countries without having the *artificial* advantage of high protective duties.

In establishing this Prussian tariff, it was laid down as a fundamental truth that, the principle of *free trade,* and the necessity of obliging other countries, who practically do not hold to it, to come at some future time to more generous terms, was correct. And for this reason it was designed to set them an example of moderation, by which manufacturing industry would grow up in the natural progress of development. Consequently this tariff contains *no tax that would amount to a prohibition,* as is the case with England and France. All *raw materials for manufacture* are *imported free of duty;* consequently, all American materials as well as others. (But the English and French tariffs, on the contrary, tax a number of those articles very highly, for instance: corn, wool, etc., in France, cotton yarn, sugar, etc.) The *exportation is free of duty,* as well the produce of agri-

cultural as manufacturing industry. *Protection* is only given to manufactures of natural growth sufficiently to put them on an equal footing with the foreign in the market, and to secure a sound and firm standing: when this is accomplished, the tariff is gradually, *but slowly*, reduced, in order to keep them diligent in their competition with other countries. The report quoted above, justly acknowledges that the tariff of the Germanic Union is the least as to the number of articles taxed, and lowest in duties, their number in the Prussian tariff amounting to about 43, but in the English tariff to about 1,150. The basis of the Prussian tariff is calculated to be an *ad valorem* duty of 10 per cent on *manufactured* articles, but the duties being counted by weight, vary from about 2 per cent *ad valorem*, to, as high as 80 per cent, on heavy articles. The articles which are levied upon include also those which Germany cannot produce, and articles of luxury; and the tax on these *is not considered as protection, but as a revenue.* The system of tariff already described, differs from all others in not protecting every thing, and thereby preventing the injuries which result from any other system, where protection is extended to every branch of industry; as for instance, to prevent the injury to the agricultural interest, from protecting the manufacturing, they extend it to agriculture, and thereby render every thing so dear as to diminish the exportation to foreign markets, which are supplied by the cheapest producer. They forget the principle, that whatever increases the price of raw materials increases the price of production; and also, that the extension of home production under such circumstances, is attended by a diminution of the real income of capital, or the real wages, or both together in thickly settled countries, but principally the latter.

The *results* of the Prussian tariff and the commercial union have been advantageous to manufactures and commerce, by creating a free trade through all the States, the only condition in which it is possible for internal industry to prosper.

In the report quoted above, we see that the German States now supply, in part, the markets of South America, Cuba, and the United States, which before, the English supplied entirely, and that the consumption of woollen and cottons in the Rhenish States has diminished to about one-half their former supplies from England, being now supplied by the home manufactures of the Union, on account of their greater cheapness.

It is evident that this tariff is not disadvantageous to commerce with the United States, since the raw materials of this country are received there free, whereas England and France tax them, and German goods being cheaper and equal in quality (as the quoted report, pages 5 and 6, acknowledges) to those produced by the two former nations, would make it the more profitable, and thereby save the tax imposed by those two countries. The use of American materials in Germany is much greater than appears in the statistics of the imports and exports of the U. States; for instance, the cotton manfacture has increased there during the last ten years to a very considerable degree; and the American materials which come in an indirect way through England, France and Holland, to be used in the German manufactories, amount, according to the last statistics, to more than France consumes in her manufactories.

The free ports of Hamburg and Bremen do not belong to the Germanic Union as yet, so that a direct trade with the Union can only be carried on through the Prussian ports, or through the ports of Holland; but the proper contracts have been made for that purpose by the Union, with Hamburg and Bremen.

I shall conclude by making some observations with respect to the currency as far as it relates to the tariff. If by an overissue of paper money, in such countries as use the tariff as a protection, prices rise above their customary level, foreigners would take advantage of it, on finding that they could import with profit, and pay the duties, so that the tariff would no longer be a protection; if for instance, prices rise 50 per cent, which is no uncommon occurrence during an overissue of paper money; and if those articles are protected by a duty of 15 per cent, the foreign importer gains still a handsome profit, after having paid the duty. Therefore, where the tariff is intended as a permanent protection, there also the *standard of value must be as stable as possible.* This latter desideratum has been attained by some of the German States, since they use entirely specie, or in a small proportion, paper, as the currency, as Prussia, whose paper consists of about one-fourth or one-fifth of the circulating medium, the amount being fixed by law, and in the hands of government, the discounting being done entirely by private citizens.

I repeat, that the principal intention of the Prussian tariff has for its object the employment, by the manufacturing industry of the surplus population and capital which, otherwise, would emigrate. Whether similar reasons in regard to an abundant population and surplus capital would require a similar provision, or whether the United States must protect their manufactories which they have called forth and encouraged, I leave for others to determine.

*Union College, May* 28, 1841

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[For the Northern Light.]

## THE TARIFF.

BY D. B. STOCKHOLM.

In the opinion of statesmen, the subject of this article is full of difficulty, and their sentiments differ widely concerning it.

Those of England are the professed advocates of free trade; but in practice they are the supporters of a protecting system. The same practice prevails in the European States generally, and their actions afford the best evidence of their opinions. The advocates of a free commerce, it is true, are to be found in England. The subject is often referred to committees of Parliament—the result of their labors are freely imparted to the world; but judging from their actions, those reports are made for exportation, not for domestic use. That an unshackled commerce would be of immense benefit to the civilized world cannot admit of a doubt; but the great powers of Europe refusing to agree to it, the United States must look to their own immediate interests.

Looking at the state of the world, and the conduct of its nations, the question is, what would be a suitable tariff for the United States? Under our institutions it must be a tariff for revenue only, and yet it may so operate as to be a tariff of protection.

Our imports for 1840, amounted in round numbers to one hundred millions. Take this as evidence of what will be our future imports, and a duty of 20 per cent would afford a revenue of twenty millions.

The United States will probably need a revenue to that amount for many years to come, and if a duty of 20 per cent should be imposed upon the whole amount of imports, it would be produced.

There are those who believe that this revenue should be raised for the most part from luxuries. This could not be done, for it would render it necessary to impose so high a duty as to amount to a prohibition, and the supply would be received for the most part from the smuggler.

Sound policy may require the prohibition of a few articles of luxury, which prove injurious to public morals and ruinous to individuals; but as a general rule, luxuries should be taxed no higher than articles of necessity, and with a few exceptions the duty should be the same on all. Silks and leghorns for example, are luxuries; woollen and cotton goods necessaries.

The fashionable lady chooses to wear silks and leghorns; the plain mechanic woollen and cotton goods. Both have equal rights, and both should be gratified. The one pays for the gratification of her vanity, the other for what we call necessaries. Their rights are equal, and we cannot with justice call on the one more than the other to contribute an undue proportion for the support of government.

A tax on imports can never operate equally, simply because one citizen will consume twice as much as another; the comparatively poor man more than his rich neighbor. Yet the tax is in a measure voluntary, and is submitted to with cheerfulness.

The people of the south will not consent to this taxation of imports for the encouragement of domestic manufactures; but they object not to duties for the purpose of revenue merely. Very well, let them be gratified; impose a duty of 20 per cent upon all imports, and the manufacturer will require no protection. It would afford to him all the advantage he has a right to ask; although it should be laid for the sole purpose of producing a revenue, and then politicians of the south would be satisfied. It would at once strike at the root of all those heart-burnings, jealousies and bickerings which have so long distracted the nation.

No tariff can prevent the increase of luxury in free commercial States. Luxury will always keep pace with wealth; and we must adopt the Spartan system, or expect the people of the United States in time to become as luxurious as their older neighbors.

Luxuries the people will have; they have a right to have them, and with a few exceptions, they should be enabled to obtain them as cheap as foreign goods called necessaries.

Why is so great a solicitude manifested to produce at home the article of silk? Because the people require it, and will have it; and yet it is among the leading articles of luxury. The same remark will apply to sugar, tea, coffee, spices, &c. &c. They are no longer luxuries in the United States; long use has rendered them necessaries, essential to the comfort of the mass of the nation. The people will have them at all events, and at any price. Set down all these and similar articles as necessaries, and tax them as such. Or, in other words, raise your revenue by the same duties upon all imports, with the exception of a very few articles, the entire exclusion of which is required by sound policy.

Here, then, is a tariff as simple as can be desired, and which will prove satisfactory to all sections of the Union; and such a tariff will at the same time afford adequate protection to domestic manufactures.

The protecting policy of the great powers of Europe will compel the people of our grain-growing districts to manufacture extensively. The present price of produce will not pay the cost of production.

The surplus of our great staples must be reduced, and a portion of the capital now employed in agriculture in the Northern and Middle States may be spared for other purposes. The Western States will become the granaries of the Union; and the Northern and Middle States the manufacturers of the wool and cotton of the United States.

If Switzerland can rival England in the cotton manufacture, so can the people of the Northern and Middle States. If Germany can rival England in the woollen manufacture, so can the people of the free States, and they will be compelled to do it too.

We are destined to become a great manufacturing as well as an agricultural and commercial people, if the present European system shall be continued, willingly, or unwillingly; and the policy we shall be obliged to adopt will compel the European nations to repeal their prohibitory and protecting duties. It will bring about a free commerce; it will cause a repeal of the English corn laws if any thing will.

With their present corn laws the English manufacturer will be unable to compete with those of America or Germany. At this day the English manufacturer pays $1.80 for a bushel of wheat, the American manufacturer less then a dollar; and the same remark will apply to other articles; and with the present system in England, there will always be a difference of 25 per cent in favor of the American manufacturer. The English statesmen are fully aware of this; hence their great solicitude about the American tariff.

We have at this day an immense surplus of the great staples of the grain-growing regions, and if great improvements shall take place in agriculture, it must increase annually; other nations will require only a small portion of it; where shall we find a market for the residue?

With a revenue duty of 20 per cent, American manufactures must increase and flourish; and the day is not far distant when England will find us a formidable rival in the market of the world.

The farmers of the Northern and Middle States will produce no more bread stuff than shall be necessary for their own consumption, if as much. They will grow wool and become their own manufacturers. The work has already commenced, and it will progress steadily. The manufacturer will need no duty for protection. The duty for the purpose of revenue only will from the necessity of the case, be so high as to afford him all the advantage he will require; and to a moral certainty it will always hereafter require a duty of 20 per cent upon the whole of our imports to produce the necessary revenue.

Our national expenses must increase annually, and it may well be doubted whether a sufficient revenue can be derived from foreign commerce to defray them; certainly, not without duties sufficiently high to afford the necessary aid to domestic manufactures.

*Ithaca, May* 31, 1841.

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We have only room under our politico-economical head, to say, that the President of the U. S. in his Message to Congress, on the 1st inst. thus refers to the Compromise Act, to which Mr. Woodbury's Report relates:—

"The act of 2d March, 1833, commonly called the compromise act, should not be altered except under urgent necessities, which are not believed at this time to exist. One year only remains to complete the series of reductions provided for by that law, at which time provisions made by the same law, and which then will be brought actively in aid of the manufacturing interests of the Union, will not fail to produce the most beneficial results. Under a system of discriminating duties imposed for the purposes of revenue, in unison with the provisions of existing laws, it is to be hoped that our policy will, in the future be fixed and permanent, so as to avoid those constant fluctuations which defeat the very objects they have in view."

# Agriculture.

## LEGISLATIVE AID TO AGRICULTURE.

As it must be a matter of interest to our agricultural readers to know the provisions of the act recently passed by the legislature of the state, in aid of its agriculture, we publish it entire. It will be observed that the whole amount appropriated from the Treasury, is $8,000; that the sum of $700 is placed at the disposal of the State Agricultural Society, and that the residue is to be distributed in specified sums, among the counties of the state in ratios conforming to their population. The amount appropriated for the benefit of the county of New-York, is placed at the disposal of the American Institute, the annual exhibitions of which have done not a little to stimulate the industry of the State.

The condition on which the appropriation is to be made, is substantially the same as that on which the distribution of school moneys was originally granted—that the recipients raise an equal sum from their own resourses; and, indeed, the same principle is now applied to the distribution of moneys from the literature fund for the purchase of libraries and apparatus for academies. Thus the law helps those who are willing to help themselves.

The expenditure of the money appropriated by the state, is very properly subjected to a strict accountability, the respective societies being required to make annual returns in detail to the comptroller, with vouchers exhibiting the payments which shall have been made.

It will be perceived that the County Clerks are required, by the 7th Section, to give notice of the time and place for meetings to form County Agricultural Societies; and as it is to be a notice of four weeks, it is desirable that the duty should be immediately performed, so that time may be given for a compliance with the condition, on which a participation in the public bounty is dependent. J. A. D.

### AN ACT TO PROMOTE AGRICULTURE.

[Passed May 5, 1841.]

*The People of the State of New-York, represented in Senate and Assembly, do enact as follows:*

§ 1. The sum of eight thousand dollars per annum, shall be and hereby is appropriated for the term of five years, for the promotion of agriculture and household manufactures in this State, in the manner following, to wit:

To the county of Albany, the sum of two hundred and five dollars.

To the county of Allegany, the sum of one hundred and twenty-three dollars.

To the county of Broome, the sum of sixty-seven dollars.

To the county of Cattaraugus, the sum of eighty-six dollars.

To the county of Cayuga, the sum of one hundred and fifty-one dollars.

To the county of Chautauque, the sum of one hundred and forty-three dollars.

To the county of Chemung, the sum of sixty-two dollars.

To the county of Chenango, the sum of one hundred and twenty-two dollars.

To the county of Clinton, the sum of eighty-four dollars.

To the county of Columbia, the sum of one hundred and thirty-three dollars.

To the county of Cortland, the sum of seventy-five dollars.

To the county of Delaware, the sum of one hundred and six dollars.

To the county of Dutchess, the sum of one hundred ond fifty-seven dollars.

To the county of Erie, the sum of one hundred and eighty-six dollars.

To the county of Essex, the sum of seventy-one dollars.

To the county of Franklin, the sum of fifty dollars.

To the county of Fulton and Hamilton, the sum of sixty dollars.

To the county of Genesee, the sum of one hundred and seventy-nine dollars.

To the county of Greene, the sum of ninety-one dollars.

To the county of Herkimer, the sum of one hundred and twelve dollars.

To the county of Jefferson, the sum of one hundred and eighty-three dollars.

To the county of Kings, the sum of one hundred and forty-three dollars.

To the county of Lewis, the sum of fifty-three dollars.

To the county of Livingston, the sum of one hundred and seventeen dollars.

To the county of Madison, the sum of one hundred and twenty dollars.

To the county of Monroe, the sum of one hundred and ninety-four dollars.

To the county of Montgomery, the sum of one hundred and seven dollars.

To the county of New-York, the sum of nine hundred and fifty dollars, to the American Institute.

To the county of Niagara, the sum of ninety-three dollars.

To the county of Oneida, the sum of two hundred and fifty-five dollars.

To the county of Onondaga, the sum of two hundred and four dollars.

To the county of Ontario, the sum of one hundred and thirty dollars.

To the county of Orange, the sum of one hundred and fifty-two dollars.

To the county of Orleans, the sum of seventy-five dollars.

To the county of Oswego, the sum of one hundred and thirty-one dollars.

To the county of Otsego, the sum of one hundred and forty-eight dollars.

To the county of Putnam, the sum of thirty-eight dollars.

To the county of Queens, the sum of ninety-one dollars.

To the county of Rensselaer, the sum of one hundred and eighty dollars.

To the county of Richmond, the sum of thirty-four dollars

To the county of Rockland, the sum of thirty-six dollars.

To the county of Saratoga, the sum of one hundred and twenty-one dollars.

To the county of Schenectady, the sum of fifty-one dollars.

To the county of Schoharie, the sum of ninety-seven dollars.

To the county of Seneca, the sum of seventy-four dollars.

To the county of Steuben, the sum of one hundred and thirty-eight dollars.

To the county of St. Lawrence, the sum of one hundred and seventy dollars.

To the county of Suffolk, the sum of ninety-seven dollars.

To the county of Sullivan, the sum of forty-seven dollars.

To the county of Tioga, the sum of sixty-one dollars.

To the county of Tompkins, the sum of one hundred and fourteen dollars.

To the county of Ulster, the sum of one hundred and thirty-seven dollars.

To the county of Warren, the sum of forty dollars.

To the county of Washington, the sum of one hundred and twenty-three dollars.

To the county of Wayne, the sum of one hundred and twenty-six dollars.

To the county of Westchester, the sum of one hundred and forty-six dollars.

To the county of Yates, the sum of sixty-one dollars,

And to the New-York State Agricultural Society, the sum of seven hundred dollars.

§ 2. When the New-York State Agricultural Society, and any county agricultural society now formed, or which may hereafter be formed in this state, or the American Institute in the city of New-York, shall raise by voluntary subscription any sum of money, the president and treasurer shall make and subscribe an affidavit of the facts of the formation of such society, and of their having raised a certain sum, specifying the amount thereof, which affidavit shall be filed with the comptroller of this state, who shall draw his warrant on the treasurer for a sum equal to the amount of such voluntary subscription, not however exceeding the amount to which such county or state society would be entitled, according to the apportionment aforesaid.

§ 3. The New-York State Agricultural Society and the several county agricultural societies now formed or which shall be formed in this state, during the continuance of this act, shall annually elect such and so many officers as they shall deem proper; and it shall be the duty of such officers annually, to regulate and award premiums on such articles, productions and improvements, as they may deem best calculated to promote the agricultural and household manufacturing interests of this state, having especial reference to the nett profits which accrue, or are likely to accrue, from the mode of raising the crop or stock, or the fabrication of the article thus offered, with the intention that the reward shall be given for the most economical or profitable mode of competition; provided always that before any premium shall be delivered, the person claiming the same, or to whom the same may be awarded, shall deliver in writing to the president of the society as accurate a description of the process in preparing the soil, including the quantity and quality of manure applied, and in raising the crop, or feeding the animal, as may be; and also of the expense and product of the crop, or of increase in value of the animal, with the view of showing accurately the profit of cultivating the crop, or feeding or fattening the animal.

§ 4. The president of the State Agricultural Society, and the several presidents of the said county societies, who shall receive or expend any of the moneys hereby appropriated, shall annually, in the month of December, transmit to the comptroller a detailed account of the expenditure of all the moneys which shall come into their hands under this act, and stating to whom and for what purpose paid, with the vouchers thereof; and the said presidents of the several county agricultural societies shall annually transmit in the month of December, to the Executive Committee of the New-York State Agricultural Society, all such reports or returns as they are required to demand and receive from applicants for premiums, together with an abstract of their proceedings during the year.

§ 5. The Executive Committee of the New-York State Agricultural Society shall examine all reports and returns made by the presidents of the county agricultural societies, and condease, arrange and report the same, together with a statement of their own proceedings, to the secretary of state, in the month of January in each year.

§ 6. The presidents of the several county societies, or delegates to be chosen by them annually for the purpose, shall be ex-officio members of the New-York State Agricultural Society.

§ 7. It shall be the duty of the county clerks in the several counties of this state to cause notice to be given in one or more newspapers in each county, of the time and place of a meeting to be held in such county for the purpose of organizing such county agricultural society; and notice thereof shall be given at least four weeks previous to such meeting.

§ 8. This act shall take effect immediately.

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**We annex, by request, the following article from the Cultivator, containing a list of the Premiums to be awarded by the State Agricultural Society, and of the proposed Cattle Show and Fair, to be held under its direction in September next, at Syracuse.**

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### CATTLE SHOW AND FAIR,

*Of the N. Y. State Agricultural Society—to be held at Syracuse, Sep. 29 and 30, 1841.*

The New-York State Agricultural Society will hold a Cattle Show and Fair at Syracuse, on the 29th and 30th days of Sept., 1841, at which time the following Prizes will be awarded. The Premiums offered are numerous rather than large, the Society preferring to make their appeal to the emulation and public spirit of our agricultural population, rather than to that avarice which can alone be called into action by the inducement of large rewards.

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### LIST OF PREMIUMS.

#### ON CATTLE.

I. BULLS—*Of any breed, 3 years old and over.*

| | | | |
|---|---|---|---|
| For the best, | $20 | For the third best, | $8 |
| For the second best, | 12 | For the fourth best, | *Diploma.* |

II. BULLS—*Of any breed, over 2 and under 3 years old.*

| | | | |
|---|---|---|---|
| For the best, | $20 | For the third best, | $8 |
| For the second best, | 12 | For the fourth best, | *Diploma.* |

III. BULLS—*Of any breed, under 2 years old.*

| | | | |
|---|---|---|---|
| For the best, | $12 | For the third best, | $5 |
| For the second best, | 8 | For the fourth best, | *Diploma.* |

IV. COWS—*Of any improved breed, 3 years old and upwards.*

| | | | |
|---|---|---|---|
| For the best, | $20 | For the third best, | $8 |
| For the second best, | 12 | For the fourth best, | *Diploma.* |

V. HEIFERS—*Of any improved breed, 2 years old and over.*

| | | | |
|---|---|---|---|
| For the best, | $12 | For the third best, | $5 |
| For the second best, | 8 | For the fourth best, | *Diploma.* |

VI. HEIFERS—*Of any improved breed, under 2 years old.*

| | | | |
|---|---|---|---|
| For the best, | $10 | For the second best, | $5 |
| For the third best, | *Diploma.* | | |

VII. COWS—*Cross between the native and improved breeds.*

| | | | |
|---|---|---|---|
| For the best, | $12 | For the third best, | $6 |
| For the second best, | 9 | For the fourth best, | *Diploma.* |

VIII. HEIFERS—*Cross between the native and improved breeds.*

| | | | |
|---|---|---|---|
| For the best, | $10 | For the third best, | $5 |
| For the second best, | 8 | For the fourth best, | *Diploma.* |

IX. COWS—*Native breeds.*

| | | | |
|---|---|---|---|
| For the best, | $10 | For the third best, | $5 |
| For the second best, | 8 | For the fourth best, | *Diploma.* |

**The greatest combination of those points or properties which indicate milking qualities and an aptitude to take on flesh on the more valuable parts, together with general beauty of form, (size in itself not being considered a criterion of excellence,) will be the considerations which will govern the viewing committee in awarding premiums in the above classes.**

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#### ON HORSES

| | | | |
|---|---|---|---|
| For the best Stallion, | $20 | Best breeding Mare & Colt, | $20 |
| For the second best, | 12 | For the second best, | 12 |
| For the third best, | 8 | For the third best, | 8 |
| For the fourth best, | *Diploma.* | For the fourth best, | *Diploma.* |

**A variety of horses possesing size, strength, and endurance for field labor, combined with that action which qualifies for the carriage or saddle—in short, the horse *of all work*, is probably the most profitable class which our farmers can now engage in rearing, and to such, therefore, will the preference of the Society be given.**

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#### SWINE—*Over 10 months old.*

| | | | |
|---|---|---|---|
| For the best Boar, | $10 | For the best breeding Sow, | $10 |
| For the second best, | 8 | For the second best, | 8 |
| For the third best, | 5 | For the third best, | 5 |
| For the fourth best, | *Diploma.* | For the fourth best, | *Diploma.* |

**In awarding premiums on hogs, reference will not be had exclusively to size or to present condition, but to that form and that proportion of bone and offal to more valuable parts, which promises the greatest value from the least amount of feed.**

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#### SHEEP—I. Long Wooled.

| | | | |
|---|---|---|---|
| For the best Buck, | $10 | For the best pen of 3 Ewes, | $10 |
| For the second best, | 5 | For the second best, | 5 |
| For the third best, | *Diploma.* | For the third best, | *Diploma.* |

II. Middle Wooled.

| | | | |
|---|---|---|---|
| For the best Buck, | $10 | For the best pen of 3 Ewes, | $10 |
| For the second best, | 5 | For the second best, | 5 |
| For the third best, | *Diploma.* | For the third best, | *Diploma.* |

III. Fine Wooled.

| | | | |
|---|---|---|---|
| For the best Buck, | $10 | For the best pen of 3 Ewes, | $10 |
| For the second best, | 5 | For the second best, | 5 |
| For the third best, | *Diploma.* | For the third best, | *Diploma.* |

**The term "long wooled" is designed to include the Leicesters, Lincolns, Cotswolds, and all the English varieties of sheep which furnish the quality of wool suitable for combing—the "middle wooled" the South Down, Norfolk, Dorset, Chevoit, native, &c.—the "fine wooled" the Spanish and Saxon varieties of the Merino and some of their crosses.**

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#### FARM IMPLEMENTS.

| | | | |
|---|---|---|---|
| For the best *Plow*, | $30 | Best *Thrashing Machine*, | $20 |
| For the second best, | 20 | For the second best, | 10 |
| For the third best, | 10 | For the third best, | *Diploma.* |
| For the fourth best, | *Diploma.* | For the best *Horse Rake*, | 8 |
| For the best *Harrow*, | 8 | For the second best, | 5 |
| For the second best, | 5 | For the third best, | *Diploma.* |
| For the third best, | *Diploma.* | For the best *Fanning Mill*, | 8 |
| For the best *Cultivator*, | 8 | For the second best, | 5 |
| For the second best, | 5 | For the third best, | *Diploma.* |
| For the third best, | *Diploma.* | For the best *Straw Cutter*, | 8 |
| For the best *Drill Barrow*, | 8 | For the second best, | 5 |
| For the second best, | 5 | For the third best, | *Diploma.* |
| For the third best, | *Diploma.* | | |

**Discretionary premiums will also be awarded to manufacturers of the best sub-soil and side-hill ploughs, hoes, shovels, spades, forks, rakes, and other farming utensils.**

**The economy and durability, as well as the excellence, in other respects, of farming implements, will be taken into consideration.**

**Discretionary premiums will be awarded for the best samples and best varieties of winter and spring wheat, corn, rye, barley, oats, peas, beans, buckwheat, hemp, flax, broom corn, maple, and beet root sugar, &c. &c.**

**Also, potatoes, turneps, sugar beets, mangel wurtzel, carrots, pumpkins, and horticultural products generally.**

**Also, fruits of all kinds, and flowers.**

**The varieties, when different from those in common use, should be properly explained, the method of Culture, &c.**

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### PRIZES TO BE AWARDED IN ALBANY.

**The following premiums will be awarded at the annual meeting of the Society on the 3d Wednesday of January, 1842:**

#### BUTTER AND CHEESE.

| | | | |
|---|---|---|---|
| For the best sample of Butter, not less than 100 pounds, | $20 | For the best sample of Cheese, not less than 100 pounds, | $20 |
| For the second best, | 12 | For the second best, | 12 |
| For the third best, | 8 | For the third best, | 8 |
| For the fourth best, | 5 | For the fourth best, | 5 |
| For the fifth best, | *Diploma.* | For the fifth best, | *Diploma.* |

#### FIELD CROPS.

| | | | |
|---|---|---|---|
| For the best acre of *Wheat*, | $20 | The best acre of *Potatoes*, | $15 |
| For the second best, | *Diploma.* | For the second best, | *Diploma.* |
| The best acre of *Barley*, | $15 | Best acre of *Sugar Beets*, | $15 |
| For the second best, | *Diploma* | For the second best, | *Diploma.* |
| For the best acre of *Rye*, | $15 | Best acre of *Ruta Baga*, | $15 |
| For the second best, | *Diploma* | For the second best, | *Diploma.* |
| For the best acre of *Oats*, | $15 | The best acre of *Carrots*, | $15 |
| For the second best, | *Diploma.* | For the second best, | *Diploma.* |
| Best acre of *Indian Corn*, | $20 | For the best acre of *Peas*, | $15 |
| For the second best, | *Diploma* | For the second best, | *Diploma.* |

**The rules and regulations which will govern the Society in awarding their premiums, will be published in the next number of the Cultivator**

## CONSIDERATIONS UPON THE AGRICULTURE OF THE ANCIENTS, AND ITS PROGRESS DOWN TO MODERN TIMES.*

[Translated from the French of the Baron Juchereau de St. Denys, for the Northern Light, by John A. Dix.]

### *Agricultural maxims or principles adopted by the ancient Romans.*

The principles, by which the labors of agriculture may be advantageously guided, should be drawn from experience and from the traditions handed down from generation to generation by antecedent cultivators. The Romans held in high estimation the agricultural maxims, which they had received from their ancestors, or which they had derived from the writings of the scientific agriculturists of Greece. Let us consider some of these maxims as illustrative of the rural economy of the ancient Romans.

The first was, *to sow little and labor much*; the ancient cultivators having observed that the products of agricultural industry were not in proportion to the quantity of seed sown, but in proportion to the amount of labor expended in preparing and working the soil. Pliny and Virgil regarded large farms as prejudicial to agriculture. The Carthaginian agriculturists said, that the quantity of land should never exceed the powers of the cultivator, but, on the contrary, that he should possess more physical force than was necessary for the proper cultivation of his farm.

The second was, *that the owner of the land should, as far as possible, reside upon it.* The celebrated Carthaginian agriculturist Mago said that he, who bought a farm, should immediately sell his town-house.

The third maxim was designed to show that it is much more advantageous to cultivate well a small piece of ground, than to cultivate indifferently a greater surface. Columella, on this point, recites the following anecdote: "A vine-dresser had two daughters and a vineyard. When his eldest daughter was married, he gave her the third of the vineyard. Yet he obtained from the two-thirds, which remained, as large a harvest as the whole property yielded before. He gave another third of the same vineyard to his second daughter on her marriage. Redoubling his care and efforts, he obtained from the third, which he reserved to himself, the same quantity of grapes as he had been accustomed to receive from the entire vineyard."

Pliny states a fact, which confirms the same maxim: "A cultivator," says he, "obtained from his fields more abundant crops than his neighbors. The latter accused him of sorcery, and put him upon his trial. He presented to the judge his farming utensils, which were of excellent construction and in good order, his oxen, which were strong and in fine condition, and a robust, active and intelligent daughter. 'Behold,' exclaimed he, 'the magic arts, which I have employed to procure from my fields more abundant harvests than those, which my more negligent and less active accusers obtain from theirs.' He was immediately acquitted."

Pliny observes, as furnishing the foundation of a fourth maxim, that there should be no profusion in agricultural industry; and he adds that in unduly extending its operations, we expose ourselves to loss and injury as effectually as by an insufficient and imperfect application of labor.

Economy is the fifth maxim of the ancient agriculturists. We should consider him, says Pliny, a bad farmer, who buys that which his ground may be made to produce, or who performs in the day time labor, which may be done in the evening.

Mildness and humanity were inculcated by the ancient agriculturists towards domestics and slaves.

Columella, Pliny and Virgil recommended to cultivators to unite theory with practice, and to pay particular attention to meteorological phenomena in respect to different species of culture. These authors and Varro also affirm that it is impossible to become a skilful agriculturist without making, in different branches of cultivation and in the labors of agriculture, a variety of experiments. Experience and imitation, says Varro, are the best instructors for agriculturists and the surest mode of bringing their labors to perfection.

### *Products and profits of agriculture in the time of the ancient Romans.*

The ordinary mode of calculating the profits resulting from the cultivation of the earth consists in knowing the numerical quantity of the produce of the seed. But this method is deceptive, and is often the source of egregious errors. For on a farm well watered and manured, forty times the quantity of the seed may some times be obtained, while with a more negligent culture the same land would yield not more than five or six times the quantity of the seed sown. The Old Testament informs us that the patriarch Isaac obtained sometimes a hundred for one from a field in the land of Gerar. The Evangelist Mark tells us that seed sown on good ground produces, "some thirty, some sixty, and some an hundred."

Varro informs us that good lands in the vicinity of Garada in Syria and of Byzacium in Africa often yielded a hundred fold. Pliny adds that in the fields in this part of Africa, a hundred stalks of wheat have often been produced from a single grain. The argillo-siliceous soils of Byzacium were cultivated with difficulty in dry seasons by oxen of the greatest strength, while with a single ass it could be broken up and prepared for seed when the earth was moistened by rain.

The productions of the earth in Italy were much less abundant. They were ten for one on good lands, excepting in Tuscany, where they were equal to fifteen for one. The crops were comparatively much less considerable in the time of Columella, when agriculture had already fallen into neglect.

The price of land in the time of Pliny and Columella was twenty-five times the average value of the annual crops. Capital invested in the purchase of land was considered at that time as yielding four per cent annually. The ordinary rate of interest was six per cent. But this interest was conventional, not legal; for money, being regarded as an article of merchandise, could be loaned at any price. The rate of interest was, therefore, uncertain and variable, and was enhanced or depressed according to circumstances.

### *The Roman agriculturists considered in reference to agricultural art and the sciences.*

The sciences cultivated by the Greeks and Romans were principally mathematical and speculative. They knew nothing of chemistry, vegetable physiology and other branches of natural history. None of their writers on agriculture undertake to explain the foundation of the maxims or practices in use. Unable to account upon philosophical principles for the different phenomena of nature, the Greek and Roman agriculturists had recourse to supernatural causes. There was no limit to their superstitious notions. They believed in the existence of good and bad spirits, whose influence was exceedingly powerful on the productions of the earth. Hesiod attached as much importance to propitious and unpropitious days as to processes dictated by experience. These superstitions are manifest in the writings of Homer, Aristotle and Theophrastus. They believed in the transmutation of plants, in the powerful influence of changes of the moon and in the impregnation of animals by certain winds. Lord Kames, in congratulating the present age on its freedom from such absurdities, observes that the religious ideas of Cato on the subject of agriculture were curious and extravagant.

But agriculture, which had improved previously to the age of Cato, began to decline after the death of that agriculturist. The Romans made some progress in husbandry and in the art of breeding and improving domestic animals. But the cultivators of the soil had no other rules among them, excepting those, for which they were indebted to the genius and experience of the agriculturists of Greece.

Yet the profession of agriculture always enjoyed a high consideration among the Romans. The soldiers of Rome in extending their conquests never failed to diffuse their agricultural knowledge throughout those countries, in which agriculture was, as it were, an unknown art. An agriculturist as well as a conqueror, every soldier, at the permanent military stations, cultivated the earth and taught the inhabitants of the surrounding districts how to turn their labor to the best account. Switzerland, Germany and Great Britain were indebted to the lessons and the examples of the Roman soldiers for their knowledge of the first principles of agriculture. But the Jews, the Babylonians, the Egyptians, the Carthaginians and the Greeks, as well as the colonies of the two last nations, had nothing to learn from the Romans as to the cultivation of the earth.

From the time of Varro agriculture began to decline in Rome. It reached the last stage of depression when Pliny wrote.

The greater part of the principal families in Rome, confiding in the revenues, which they drew from the provinces, neglected their lands in Italy, and ruined their tenants by exacting from them exorbitant rents. Civil wars, the tyrannical exactions of the emperors and of the greedy multitude of their courtiers, the transfer of the seat of the empire to Constantinople near the middle of the third century destroyed Italy and opened the way to the invasion of the barbarians, and buried agriculture and the arts in one common ruin.

* Journal of the Academy of Agriculture, Manufacturing and Commercial Industry: Paris. Vol. 6. No. 66.

## THE LABORING CLASSES IN IRELAND.

BY JOHN A. DIX.

Ireland rejoices in a temperate climate and a fertile soil; but bad government has reduced multitudes of the inhabitants, with which that country teems, to the lowest condition of penury and want. Able, enterprising and resolute men are engaged in active efforts to relieve her from the social evils with which she is afflicted, and their success has thus far outstripped the expectations of the most sanguine. The movement of Father Matthew exhibits an uninterrupted succession of the most extraordinary triumphs. The whiskey-drinking propensity which has dishonored her as it has us, seems in a fair way to be eradicated. The renunciations are no longer reckoned by thousands, but by hundreds of thousands. According to the British Temperance Inquirer of February last, Father Matthew stated on a recent occasion that his pledged converts amounted to three millions, three hundred thousand—more than three eighths of the entire population of the kingdom. The influence of this reform upon the character and condition of the laboring classes in Ireland is wonderful. Industry, sobriety and economy now prevail where sloth, inebriety and recklessness reigned before. The prison is often found untenanted, the criminal court falls through for want of a calendar and the city-police man performs his nightly vigils in silence, where riot, and debauchery, and violence have often met him at every step. But there are other evils, deep-rooted and of long standing, to be remedied. The industry of the country has been turned into false channels, and her agricultural arrangements have taken a shape in the highest degree unfavorable to the great body of those, who are included in them. The political regulations imposed on her by the jealousy of the Sister Kingdom, England, on which she is dependent, lie at the foundation of this social disorder and degradation. Ireland is like an unfortunate child, endowed with all the elements of beauty and strength, but distorted, disfigured and enfeebled by the ill-treatment of its unnatural protectors. Happily her ills are not incurable. She sees the remedy which alone can restore her to prosperity and health. The repeal of the union with England, so far as to restore to her an independent Parliament, the right to provide for her own wants by such social arragements as her condition requires, the resuscitation of her agricultural and manufacturing industry, are the immediate objects in view; and she is pursuing them with characteristic enthusiasm, energy, and zeal. Among the numerous movements in favor of these objects, we see an account in the Dublin Weekly Herald of the 20th February, of a meeting held at the Royal Exchange in that city, on the 18th of the same month, at which the Duke of Leinster presided. From the proceedings we extract the speech of Sharman Crawford, Esq. for the purpose of showing to what extremities a generous and intelligent people—a people distinguished by fine attributes of character, and susceptible of high intellectual and social improvement—may be reduced by a government standing to them in a relation, which is neither calculated to excite pride in their prosperity, nor sympathy in their sufferings.

"Mr. Sharman Crawford came forward to propose the next resolution, and was received with loud cheers. He said, my Lord and Gentlemen, I have great satisfaction in being enabled to join with the noblemen and gentlemen who are assembled here this day in the laudable and useful object in which they are engaged, and I am peculiarly rejoiced at hearing from the sentiments expressed by some of the preceding speakers, that one of the leading objects of the association shall be to encourage and promote the interests of the small farmers of the country, and that it shall go forth from such an assemblage as this is that the small farmer is not to be dispossessed of his holding (hear, hear, and cheers.) * * Farming associations on a small scale have been some years established in that part of the country in which I live, and I am able to bear testimony to the services which they have effected in improving the state of the country, and the condition and habits of the people. It is melancholy to reflect that, although considerable advances have been made in agricultural operations of late years, the condition of the working classes has not been ameliorated in the same proportion (hear, hear.) I trust, however, that the time is coming when the progress of agricultural improvement will do something for them. Let it be borne in mind that the highest wages, on an average, which a laborer can at present obtain is only eight pence a day, and even that not for a constancy. Supposing, however, that he obtains it for a constancy, it amounts only to ten pounds a year; and how is it possible for a poor man to support existence on such a miserable pittance? It is no wonder, indeed, that he is compelled to live in the miserable hovel so feelingly described by the gentleman who preceded me; for the only thing that can surprise any one is, how they can continue to live like human beings at all on the allowance. The income of the laborer who has constant work, is, then, 10*l.* a year, out of which he has to pay 2*l.* a year for house-rent, and the clothing necessary for himself and family cannot certainly be procured under 3*l.* a year. Here are 5*l.* gone in necessaries with which he cannot dispense (hear.) If he has to buy fuel—and there are great numbers who cannot obtain it at-

less they buy it—it will cost him fully 2*l.* a year, and there then remains just 3*l.* for himself and family to live on (hear, hear.) He is placed in such a situation that he must either want food, or the other necessaries of life which I have adverted to; and the consequence is, that he does want them (hear, hear.) He is therefore compelled to occupy a house not fit for the residence of human beings; and instead of clothing, to cover himself with whatever rags chance throws in his way (hear, hear.) With respect to fuel—if he has straw, he will gladly burn it, but if not, he must use some other inferior material (hear.) One of the principal objects of the association will be, I trust, to see in what way the income of the working man can be increased, so as to give him the means of living. There is this difficulty in the way, that if his wages are raised, the farmer may not have it in his power to employ him, and I shall therefore proceed to point out a way in which his comforts and means of living can be increased, even though his wages are not raised. In order to effect this, I would propose to let the laborer have an allotment of land (hear.) Let him have a portion of land to labor at which will not take up much of his time except during his leisure hours, and with the help of his family it will supply the necessaries of existence, thus leaving his wages to procure him the comforts (hear and cheers.) I will suppose then that the laborer has an English acre of fair land, half of which he puts under potatoes. This will produce about 156 bushels, or three bushels a week, which will be sufficient for his maintenance (hear, hear.) On the other half he can have corn, which will give him meal enough for the support of his family; and on the refuse of the potatoes he can feed two small pigs (hear and cheers.) By using the straw for bedding under the pigs, he will obtain a sufficient supply of manure for his potatoes in the ensuing year (hear, hear.) By treating his land in this manner he will be independent in some degree of low wages, and of occasional absence of employment (cheers.) No society of this kind can be of utility unless its main object is the bettering the condition of the working classes generally; and I conceive that the best way of advancing the manufacture of the country is to put it in the power of the agricultural portion of the people to see them (hear, hear and cheers.) Manufactures and agriculture are intimately combined and related: and I believe that the happiest state of society will be found in a nation where the manufacturer has a portion of land allotted to him, so as to enable him to be independent of the wages of his labor. In my opinion a people to be happy should have the means of obtaining the necessaries of life from land belonging to themselves (hear and cheers.) There is another view, my Lord Duke, which I take of the subject, and which I deem an essential matter for the improvement of Ireland: if either the large farmer or small farmer be expected to improve their holdings, they must be reasonably secured in the value of the labor that they have expended in those farms (hear, hear and loud cheers.) In the other parts of the empire it is the habit of the landlords to make permanent improvements for the tenants at their own costs, but it has not or is not the habit in this country—and, therefore, when a man expends his capital in improvements, and makes improvements in his holdings by the sweat of his brow, for this is his capital, it is only fair and just that some legal means should be afforded him to establish a right to the value of these improvements, in case he is dispossessed; (cheers) and I trust that it may be an object for the consideration of the society, to think of some equitable mode by which the tenant will have a proper security for what he has so laid out, in such terms as will be satisfactory and just to both landlord and tenant (cheers.) My Lord Duke, as I before stated, I shall be most happy to give every aid in my power to this association. I trust it will progress, and that from the commencement we have made, it will tell at a future day, in the increasing and lasting prosperity of the country. Mr. Crawford concluded amidst loud cheers.

## MIDSUMMER IN THE FIELDS.

BY WILLIAM HOWITT.

I never see a clear stream running through the fields at this beautiful time of the year, but I wish, like old Izaak Walton, to take rod and line and a pleasant book, and wander away into some sylvan or romantic region, and give myself up wholly to the influence of the season; to angle and read, and dream by the ever-lapsing water, in green and flowery meadows, for days and weeks, caring no more for all that is going on in this great and many colored world, than if there was no world at all beyond these happy meadows, so full of sunshine and quietness. Truly that good old man had hit on one of the ways to true enjoyment of life. He knew that simple habits and desires were mighty ingredients in genuine happiness; that to enjoy ourselves, we must first cast the world and all its cares out of our hearts; we must actually renounce its pomps and vanities; and then, how sweet becomes every summer bank; how bright every summer stream. What a delicious tranquility falls upon our hearts; what a self-enjoyment reigns all through it; what a love; what a love of God kindles in it from all the fair things around. They may say what they will of the old prince of anglers, of his cruelty and inconsistency; from those charges I have vindicated him in another place; we know that he was pious and humane. We know that in the stillness of his haunts and the leisure of his latter days, wise and kind thoughts flowed in upon his soul, and that the beauty and sweetness of nature which surrounded him, inspired him with feelings of joy and admiration, that streamed up towards the clear heavens above him in grateful thanksgiving. It is these things which have given to his volume an everlasting charm, and that affect me, at this particular time of the year, with a desire to haunt like places. It may be the green banks of the beautiful streams of Derbyshire—the Wye or the Dove; for now are they most lovely, running on amongst the verdant hills and bosky dales of the Peak, surrounded by summer's richest charms. Their banks are overhung with deep grass, and many a fair flower droops over them; the foliage of the trees that shroud their many windings, is most delicate; and above them, gray rocks lift their heads, or greenest hills swell away to the blue sky; and as evening falls over them what a softness clothes those verdant mountains! what a depth of shadow fills those hollows! what a voice of waters rises on the hushed landscape! but even here, in the vale of Trent, it is beautiful. There are a thousand charms gathered about one of these little streams that are hastening towards our fair river. They are charms that belong to this point of time, and that in a week or two will be gone. The spring is gone with all her long anticipated pleasures. The snow drop, the crocus, the blue bell, the primrose, and the cowslip, where are they? They are all buried children of a delicate time, too soon hurried by. * * * *

But see! there are the mowers at work! there are the haymakers! green swarths of mown grass—haycocks, and wagons ready to bear them away—it is summer, indeed! what a fragrance comes floating on the gale from the clover in the standing grass, from the new mown hay; and from those sycamore trees, with all their pendent flowers. It is delicious; and yet one cannot help regretting that the year has advanced so far. There, the wild rose is putting out; the elder is already in flower; they are all beautiful, but saddening signs of the swift winged time. Let us set down by this little stream, and enjoy the pleasantness that it presents, without a thought of the future. Ah! this sweet place is just in its pride. The flags have sprung thickly in the bed of the brook, and their yellow flowers are beginning to show themselves. The green locks of the water rananculuses are lifted by the stream, and their flowers form snowy islands on the surface; the water lilies spread out their leaves upon it like the pallettes of fairy painters; and that opposite bank, what a prodigal scene of vigorous and abundant vegetation it is. There are the blue geraniums, as lovely as ever: the meadow sweet is hastening to put out its foam like flowers, that species of golden flowered mustard occupies the connecting space between the land and water: and hare-bells, the jagged pink lychnis, and flowering grass of various kinds, make the whole bank beautiful. Every plant that is wont to show itself at this season, is in its place, to give its quota of the accustomed character to the spot: every insect, to beautify it with its hues, and enliven it with its peculiar sound

There is the grasshopper, my summer friend,—
The minute sound of many a sunny hour
Passed on a thymy hill, when I could send
My soul in search thereof by bank and bower,
Till lured far from it by a foxglove flower,
Nodding too dangerously above the crag,
Not to excite the passion and the power
To climb the steep, and down the blossom drag:
Then the marsh crocus joined, and yellow water flag.

Shrill sings the drowsy wassailer in his dome,
Yon grassy wilderness, where curls the fern,
And creeps the ivy; with the wish to roam
He spreads his sails and bright is his sojourn,
'Mid chalices with dews in every urn;
All flying things alike delight have found—
Where'er I gaze, to what new region turn,
Ten thousand insects in the air abound,
Flitting on glancing wings that yield a summer's sound.

[*Wiffin's Aonian Hours.*

The May flies, in thousands, are come forth to their little day of life, and are flying up, and dropping again in their own peculiar way. The stone fly is found head downwards on the bole of that tree. The midges are celebrating their airy and labyrinthine dances with an amazing adriotness. These little creatures pass through a metamorphosis, as they settle on you in your summer walks by river sides, that must strike the careful observer with admiration. You may sometimes see a column of them by the margin of the river, like a column of smoke, and when you come near, numbers of them will settle upon your clothes—small, white, and fleecy creatures. Observe them carefully, and you will see them shake their wings, as in a little convulsive agony, press them to the sides of their body, and fairly creep out of their skins. Those skins, fine white films drawn like a glove from their bodies, and from their very legs, which are but like fine hairs themselves, they leave behind, and dart off into the air as to a new life, and with an accession of new beauty. Dragon flies of all sizes and colors are hovering, and skimming, and settling amongst the water plants, or on some natural twig, evidently full of enjoyment. The great azure bodied one, with its filmy wings, darts past with reckless speed: and slender ones—blue and purple, and dun, and black, with long jointed bodies, made as of shining silk by the fingers of some fair lady, and animated for a week or two of summer sunshine by some frolic spell, now pursue each other, and now rest as in sleep. The whitethroat goes flying with a curious cowering motion over the tops of the tall grass, from one bush to another, where it hops unseen, and repeats its favorite "chaw-chaw." The willow warbler, the mocking bird of England, maintains its incessant imitations of the swallow, the sparrow, chaffinch and the whitethroat, flitting and chattering in the bushes that overhang the stream. The landrail repeats its continuous "crake-crake," from the meadow grass, and the water itself ripples on, clear and musical, and chequered with small shadows from many a leaf and bent and moving bough. We lift up our heads—and in the west what a ruby sun—what a gorgeous assemblage of sunset clouds!

Readers and friends, are these not the characters of June fields and June brook sides? Do they not recall to your memory many a pleasant walk, many a pleasant place, and many pleasant friends? They must; for there is nothing gives us so vivid a sense of the careering of time as the passing of spring and summer.

[For the Northern Light.]

## POISON FROM ANIMAL PUTRIDITY.

BY WILLIS GAYLORD.

It is well known to those who have paid attention to such subjects, that animal matter becoming putrid under certain circumstances, or suffering decomposition in certain conditions, becomes a most virulent poison, capable of destroying life when taken into the circulation by absorption, or applied to the stomach or to an abraded surface.

The surgeon who frequents dissecting rooms is aware of the danger he runs, as scarcely a year passes in which the sacrifice of one or more valuable lives is not the result of such poisonous matter, communicated to the tissues of the system by some slight wound, a trifling sore, or perhaps a mere scratch. The terrible certainty with which such poison runs to a fatal termination, leaves but little hope to the sufferer; and is still less calculated, perhaps, to induce confidence in the remedial agents which are so potent in many other cases.

Another way in which putrid animal matter operates as poison, is shown in the effects of cheese when exposed to certain influences and changes, and taken into the stomach in that state. Perhaps there is not a year passes in which individuals, and sometimes whole families, are not poisoned with cheese; and this effect is usually, if not always, attributed to some deleterious substance, either designedly or accidentally communicated to it while making. Examinations made with the utmost care, and by skilful men, have been unable to detect any such substance, and the probability is, that the cause is to be sought in the putrid change which such cheese is found to be undergoing.

The following remarks by Professor Liebig, in his "Organic Chemistry, of Physiology aud Agriculture," would seem to throw much light on the question of animal poisons from putridity; as also on the laws which govern the particles of matter, whether sound or defective, when brought into contact with each other. The case adduced by him, is the celebrated Wurtemberg sausage, from the use of which several hundred deaths are known within a few years to have occurred, and which has in consequence become prominent in the class of putrid animal poisons. The Professor says:

"In Wurtemburg especially, these cases are very frequent, for there the sausages are prepared from very various materials. Blood, liver, bacon, brains, milk, meal, and bread, are mixed together with salt and spices; the mixture is then put into bladders or intestines, and after being boiled is smoked.

"When these sausages are well prepared they may be preserved for months, and furnish a nourishing savory food; but when the spices and salt are deficient, and particularly when they are smoked too late or not sufficiently, they undergo a peculiar kind of putrefaction, which begins at the centre of the sausage. Without any appreciable escape of gas taking place, they become paler in color, and more soft and greasy in those parts which have undergone putrefaction, and they are found to contain free lactic acid, or lactate of ammonia—products which are universally formed during the putrefaction of animal and vegetable matter.

"The cause of the poisonous nature of these sausages, was ascribed at first to hydrocyanic acid, and afterwards to sabaic acid, although neither of these substances had been detected in them. * * * The death which is the consequence of poisoning by putrefied sausages, succeeds very lingering and remarkable symptoms. There is a gradual wasting of muscular fibre, and of all the constituents of the body similarly composed; the patient becomes much emaciated, dries to a complete mummy, and finally dies. The carcass is stiff as if frozen, and is not subject to putrefaction. During the progress of the disease, the saliva becomes viscous, and acquires an offensive smell."

A variety of experiments were instituted by Colin to ascertain the *modus operandi* of this class of poisons. He found when putrefying muscle or pus is placed on a fresh wound, it occasions disease, and not unfrequently ends in death. Boiling water, or alcohol, will destroy the poisonous quality of these putrefying substances and render them innoxious, but they seem only to produce this effect by arresting the progress of putrefaction. On the contrary, when these poisons of putridity come in contact with the stomach and are taken into the circulation, or are brought into the blood through wounds, as in the dissecting room, the vital energy is not sufficient to arrest the progress of putrefaction in the matter so absorbed, but the poison retaining its active chemical

properties, imparts more or less rapidly its peculiar action to the blood, and through that to the muscular tissue.

It would seem that decomposing animal matter, however offensive it may become, rarely or never assumes the intensity of a deadly poison, unless the putrefaction is conducted in such a manner that the gases always evolved during that process are not permitted to escape, but by being retained, are reabsorbed as it were, thus adding energy and intensity to the putrid substances already developed. In cheese, the putrefactive process commences in the interior; there is no escape of gas, but the decomposition goes gradually on, and while all is fair outside, the cheese, instead of curing, is putrefying within. So with the sausages of Professor Liebig. The membraneous covering prevents the escape of the gases formed, and they are retained, while the putrefaction still goes forward. In this country we have never known an instance of poisoning from such preparations as the German sausage, but the general use of meat in all its multiplied forms, renders such an occurrence not impossible; and those from the two other kinds of animal poisons, (dissection and from cheese,) have been of sufficiently frequent occurrence to warrant the calling of the public attention to the subject, and if possible, its further investigation and elucidation.

## GEOLOGICAL DISTRIBUTION OF COAL.

The following striking observations are taken from the latest London Quarterly Review (No. 134.) "Steam is the acknowledged new element of advancement, by which this age is distinguished from all which have preceded it. By its magic power, distance is set at naught; and the productions of the antipodes are brought rapidly together. *Coal*, therefore, must henceforth be the nictor and the meter of all commercial nations. Without it no modern people can become great, either in manufactures, or in the *naval art of war*. In Western Europe, with the limited exceptions of parts of Belgium, Westphalia, and Silesia, where coal fields (comparatively small, however,) exist, Great Britain holds an almost exclusive monopoly of teis mighty agent, since the carbonaceous tracts of France are well known to be valueless for all *great* purposes. Far to the west must we indeed roam, ere we again meet with the same sinews of strength, and then we find them in the hands of our own North American Colonies and in those of our kinsmen of the United States. And even in that great Western Continent, quit but the region over which the *English* language is spoken, and you leave behind you the country of coal, there being little carboniferous matter to the south of the isthmus of Darien."

## EXPORTS OF GRAIN.

In our last, we gave the quantity of grain produced in the U. S. in 1840. The following table will show to what extent this branch of agriculture has been tributary to foreign countries.

EXPORTS OF FLOUR AND WHEAT FROM 1790 TO 1838.

| Years. | Bushels wheat exported. | Average price of wheat in England. | Barrels of Flour exported. | Av. prices of Flour each year at Philadelphia. | Value of Flour exported at av. prices in Philad'a. |
|---|---|---|---|---|---|
| 1790 | 4,124,488 | 63s 2d | 724,623 | $5 56 | $3,234,735 |
| 1791 | 4,018,339 | 47 2 | 619,681 | 5 22 | 4,328,436 |
| 1792 | 883,790 | 41 9 | 824,464 | 5 25 | 6,340,370 |
| 1793 | 1,450,575 | 47 10 | 1,074,639 | 5 90 | 5,837,469 |
| 1794 | 698 797 | 50 8 | 846,010 | 6 90 | 7,286,111 |
| 1795 | 141,273 | 72 11 | 687,369 | 10 60 | 9,064,955 |
| 1796 | 31,226 | 76 3 | 705,194 | 12 50 | 4,694,190 |
| 1797 | 15,655 | 52 2 | 515,633 | 8 91 | 4,653,975 |
| 1798 | 15,021 | 50 4 | 567,558 | 8 20 | 5,016,099 |
| 1799 | 10 036 | 66 11 | 519,265 | 9 66 | 5,439,092 |
| 1800 | 26,852 | 110 5 | 633,082 | 9 86 | 11,468,417 |
| 1801 | 239,929 | 115 11 | 1,102,444 | 10 40 | 7,978,111 |
| 1802 | 238,281 | 67 9 | 1,186,218 | 6 90 | 8,828,771 |
| 1803 | 686,415 | 67 1 | 1,311,883 | 6 73 | 6,666,365 |
| 1804 | 127,024 | 70 5 | 810,008 | 8 23 | 7,511,876 |
| 1805 | 18,040 | 87 1 | 777,513 | 9 70 | 5,713,885 |
| 1806 | 86,784 | 76 9 | 782,724 | 7 19 | 8,961,202 |
| 1807 | 776,814 | 73 1 | 1,249,819 | 7 17 | 1,501,095 |
| 1808 | 87,330 | 78 11 | 263,813 | 5 69 | 5,847,566 |
| 1809 | 393,889 | 94 5 | 846,247 | 6 91 | 7,481,298 |
| 1810 | 325,924 | 103 3 | 798,431 | 9 37 | 14,377,869 |
| 1811 | 216,833 | 92 5 | 1,445,012 | 9 95 | 14,189,526 |
| 1812 | 53,832 | 122 8 | 1,443,492 | 9 83 | 11,147,602 |
| 1813 | 288,535 | 106 6 | 1,260,942 | 8 92 | 1,662,156 |
| 1814 | | 72 1 | 193,274 | 8 60 | 7,514,456 |
| 1815 | 17,634 | 63 8 | 862,739 | 8 71 | 7,130,138 |
| 1816 | 62,321 | 76 2 | 729,033 | 9 78 | 17,291,824 |
| 1817 | 96,407 | 94 0 | 1,479,198 | 11 69 | 11,530,662 |
| 1818 | 196,808 | 83 8 | 1,187,697 | 9 96 | 5,337,192 |
| 1819 | 82,068 | 72 3 | 780,660 | 7 11 | 5,555,609 |
| 1820 | 22,137 | 65 10 | 1,177,036 | 4 72 | 5,048,248 |
| 1821 | 25,821 | 54 5 | 1,086,119 | 4 78 | 5,447,351 |
| 1822 | 4,418 | 43 3 | 827,865 | 6 88 | 5,160,708 |
| 1823 | 4,272 | 51 9 | 756,792 | 6 82 | 5,601,971 |
| 1824 | 20,378 | 62 0 | 996,792 | 5 62 | 4,150,920 |
| 1825 | 17,990 | 66 6 | 883,906 | 5 10 | 3,988,863 |
| 1826 | 45,166 | 56 11 | 887,820 | 4 65 | 4,542,234 |
| 1827 | 22,182 | 56 9 | 868,496 | 5 28 | 4,820,530 |
| 1828 | 8,906 | 60 5 | 860,809 | 5 60 | 5,300,647 |
| 1829 | 4,007 | 66 3 | 837,385 | 6 33 | 5,928,606 |
| 1830 | 45,289 | 64 3 | 1,227,434 | 4 83 | 10,243,019 |
| 1831 | 408,910 | 66 4 | 1,806,529 | 5 67 | 4,947,337 |
| 1832 | 88,304 | 58 8 | 864,919 | 5 72 | 5,380,974 |
| 1833 | 32,421 | 52 11 | 955,768 | 5 63 | 4,318,770 |
| 1834 | 35,948 | 46 5 | 835,352 | 5 17 | 4,582,848 |
| 1835 | 47,762 | 39 4 | 779,396 | 5 88 | 4,038,146 |
| 1836 | 4,062 | 48 6 | 605,400 | 7 99 | 2,986,397 |
| 1837 | 17,303 | 55 11 | 318,719 | 9 37 | 3,491,174 |
| 1838 | 6,201 | 63 4 | 448,161 | 7 79 | 1,670,512 |
| 1839 | | | 916,161 | | |
| 1840 | | | 813,842 | | |

# Literature and Science.

## THE BROKEN CUP.

BY HEINRICH ZSCHOKKE.

[Translated from the German, by MATTHEW HENRY WEBSTER.]

UNDER this name is known a little piece by the author of "Little Kate of Heilbronn." That and the following tale, had, in the year 1802, at Bern, the same origin. Heinrich Von Kleist and Ludwig Wieland, son of the poet, were friends of the author, in whose chamber hung an engraving, under which was written "La cruche cassée," which exhibited a scene very like that represented below in the section headed "The Tribunal." The expressive delineation was very pleasing, and occasioned many explanations of its meaning. In sport, the three agreed to write out their individual notions. Ludwig Wieland promised a satire; Heinrich Von Kleist threw off his comedy, and the author of this tale, what here follows.

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### MARIETTA.

NAPOULE, is indeed only a very small place on the bay of Cannes; but yet it is known throughout all Provence. It lies under the shadow of evergreen, lofty palm and darker orange trees. Now, this truly does not make it renowned. Yet it is said there are to be found the richest grapes, the sweetest roses, and the most beautiful maidens. I know not the fact, but willingly believe it. Pity that Napoule is so small, and cannot possibly produce enough of rich grapes, sweet roses, and beautiful maidens; for then might we have some of them even in our land.

If, since the foundation of Napoule, all the Napoulese have been beauties, without doubt, the little Marietta must have been a wonder of wonders, because the chronicle so pronounces her. She was called, indeed, only little Marietta; yet was she not smaller than a girl of seventeen years and over, ought to be, whose forehead reaches just to the lip of a grown up man.

The chronicle of Napoule had its sufficient reasons to speak of Marietta. Had I been in the place of the chronicler, I would have done the same. For Marietta, who with her mother Manon, until now had resided at Avignon, turned topsy turvey, when she came back to her birth-place, almost the whole village. Truly not the houses, but the people and their heads; and indeed not the heads of all the people, but especially of those whose heads and hearts in the vicinity of two beautiful soul-beaming eyes, are always in great danger. I know that! Such a situation is no joke.

Mother Manon would have done much better, if she had remained in Avignon. But she inherited a small property in Napoule; she received there an estate with some vine hills, and a neat little house in the shadow of a rock between olive trees and African acacias. Such a thing no unlowered widow refuses. Now was she in her estimation, as rich and happy as if she were Countess of Provence, or the like.

So much the worse was it for the good Napoulese. They had never foreseen such a misfortune, and had not read in Homer, that a beautiful woman had filled all Greece and Asia Minor with arms and discord.

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### HOW THE MISFORTUNE HAPPENED

Marietta had scarcely been a fortnight in the house, between olive trees and African acacias, ere every young Napoulese knew that Marietta dwelt there, and that in all Provence there was no lovelier maiden than in that house.

Went she through the lanes, tripping light and beautiful, like an angel in disguise, in fluttering dress, light green boddice, an orange flower between rose buds, in her bosom, and flowers and ribbons flying about her straw hat, which shaded her fine features; truly then the sober elders became eloquent, and the youth dumb. And on every side there opened to the right and left, a little window, or door next in the row. "Good morning," cried one, or "good evening, Marietta;" and smiling, she nodded right and left.

When Marietta entered the church, all hearts, (that is of the young,) forgot Heaven; all eyes wandered, and the praying finger lost its place among the pearls of the rosary. That certainly must have often occasioned great grief, especially to the devotional.

At this time, without doubt, the young maidens, especially of Napoule, had become very conscientious, for they were most offended. And they could hardly have been blamed for it. For since Marietta's coming, more than one betrothed had become cool, and more than one admirer faithless to his beloved. For there were quarrels and reproaches on all sides, and many tears, good lectures and refusals. No one spoke any more of marriages, but of separations. Pledges of troth, rings and ribbons, were sent back. The old took part in the quarrels of their children. Contentions and quarrels ran from house to house. 'Twas a pity.

Marietta is to blame for all, said the pious maidens; then their mothers said so; then their fathers said so; and at length all, even the young men.

But Marietta wrapped up in her modesty and innocence, as the bursting petals of the rose-bud in the dark green of the flower-cup, dreamed not of this great misery, and continued kind to all. This softened first the young men, and they said "wherefore find fault with the beautiful, harmless child? She is without blame!" Then the fathers said so; then the mothers said so; and at length all, even the pious maidens. For whoever talked with Marietta, could not fail to love her. And before half a year had passed by, every body had talked with her, and every body loved her. But she never suspected that she was so beloved; and had not before suspected, that any one could hate her. What dreams the violet, with its sober hues, often trodden down amid the grass, of the high estimation in which it is held?

Now every one desired to atone for their injustice towards Marietta. Sympathy heightened the tenderness of their good will. Every where Marietta found herself greeted more friendly than ever; more kindly smiled upon; more warmly invited to the rural sports and dances.

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### OF THE WICKED COLIN.

All men have not the gift of sweet sympathy, but there are hardened hearts like Pharaoh's. This comes without doubt, from the natural sinfulness of men since the fall.

Young Colin, the richest farmer and proprietor in Napoule, who could hardly run over the number of his vineyards and olive fields, lemon and orange trees in a day, gave a memorable example of such hard heartedness. One fact completely establishes the perverseness of his mind, and that was, that he was almost 27 years old, and had never inquired wherefore maidens were created.

All the people, indeed, especially the womankind of a certain age, at which they willingly forgive such sins, deemed Colin the best young man under the sun. His form, his free unembarrassed air, his look, his smile, had especially the good luck to please this class of people, who if need had been, would have indeed granted him absolution for any of the sins which cry out to heaven. But in the sentence of such judges, it is not well to trust.

Whilst old and young at Napoule had become reconciled to the innocent Marietta, and were bound to her by sympathy, Colin was the only one who continued without pity for the lovely girl. Did the conversation turn upon Marietta, he was dumb as a fish. Did he meet her in the street, he became red and white for very anger, and threw after her right vindictive glances.

If at evening the young people assembled on the sea shore, near the old ruins of the castle, for cheerful sport, or for rural dance, or for singing glees, Colin failed not to be there. But as soon as Marietta came, the malicious Colin was stilled; all the gold in the world could not induce him to sing any more. Pity for his lovely voice! every one gladly listened to him and his stock of songs was inexhaustible.

All the lasses looked kindly upon Colin, and he was friendly to all. He had, as has been said, a roguish look, which the lasses fear and love, and when he smiled, one would gladly have painted him. But naturally enough, the oft-affronted Marietta looked not kindly on him. And, indeed, she had a perfect right. Whether he smiled or not was the same thing to her. Of his roguish look even, she would never hear them talk: and there too she was right. When he recited, for he always knew numberless tales, and when all listened, she nodded to her neighbors, and pelted with the upturn herbage, now Peter, then Paul, and laughed and chattered, and listened not to Colin. That vexed the haughty gentleman: he often broke off in the midst of his story, and sullenly strode away.

Revenge is sweet. The fair daughter of widow Manon might well then triumph. But Marietta was yet far too good a girl and her heart too kind. If he became silent, she grieved. Were he sad, her laugh ceased. Did he go away, she remained not long: and when she got home, she wept purer tears of repentance than Magdalen, without having sinned half as much.

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### THE CUP.

The priest of Napoule, namely, Father Jerome, a greybeard of seventy years of age, had all the virtues of a saint, and only one failing, that by reason of great old age, he was very deaf. But on that very account he preached to the ears of his youthful penitents so much the more instructively. He preached continually indeed, only on two subjects, as if all his religion were bound up in them. 'Twas either, "little children love one another," or "little children, wonderful are the dispensations of providence." Yet truly, therein lies so great faith, love, and hope, that thereby, in case of need one might well be saved. The little children loved one another with entire obedience, and trusted in the dispensations of providence—only Colin, with the stony heart, would not know any thing about it. Even when he seemed to be friendly, he had evil designs.

The Napoulese gladly went to the annual fair of the city of Vence. 'Tis a joyous time, and although there may be little gold, yet there is much merchandize. Now also Marietta and mother Manon went to the fair, and there was Colin too. He bought many kickshaws and trifles for his fair friends—but for Marietta not a sous. And yet, in every place he was at her elbow. But he spoke not to her, nor she to him. 'Twas easily seen he was meditating some evil.

Now stood mother Manon motionless, before a shop, and said: "O, Marietta, see that beautiful cup! a queen need not be ashamed to touch it with her lips. See too; the brim is shining gold, and the flowers on it bloom

not more beautifully in the garden, and yet are only painted. And in the midst, Paradise! pray see, Marietta, how the apples are smiling on the trees: it almost tempts one. And Adam cannot withstand, as the enchanting Eve offers him one for food. And pray see, how prettily the little lamb frisking skips around the old tiger, and the snow-white dove with its golden green throat stands there before the vulture, as if it would caress him!"

Marietta could not look enough. "Had I such a cup, mother," said she, "it is far too beautiful to drink out of: I would place my flowers in it and constantly gaze on Paradise. We are at the fair in Vence, but when I look on the picture, I feel as if I were in Paradise."

So spoke Marietta, and called all her companions to the spot, to gaze in wonder at the cup: and soon the young men also joined the maidens, and at length almost half the inhabitants of Napoule were assembled before the wonderfully beautiful cup. But wonderfully beautiful was it also, from the inestimable, translucent porcelain, with gilded handles and glowing colors. Timidly they ask the merchant: "Sir, how dear?" And he answered: "Among friends, it is worth a hundred livres." Then all became silent and went away. When no other Napoulese stood before the shop, Colin came stealthily, threw the merchant a hundred livres upon the counter, had the cup put in a box well packed with cotton, and bore it away. His evil plans no man knew.

Near Napoule on his way home, it being already dusk, he met old Jacques, the Justice's servant, returning from the fields. Jacques was a very good man, but excessively stupid.

"I will give thee a drink-fee, Jacques," said Colin, "if thou wilt bear this box to Manon's house, and leave it there; and if any one should see you and inquire, from whom the box came, say, a stranger gave it to me. But never disclose my name, or I will always hate thee."

This Jacques promised, took the drink-money and the box, and went with it towards the little dwelling, between the olive trees and African acacias.

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THE BEARER.

Before he arrived there, his master, Justice Hautmartin, met him, and asked, "Jacques, what art thou carrying?"

"A box for mother Manon. But, sir, I cannot say from whom it comes."

"Why not?"

"Because Mr. Colin would always hate me."

"It is well that thou canst be silent. But it is already late; give me the box, for I am going to-morrow to see Mrs. Manon; I will deliver the box to her, and not betray that it came from Colin. It will spare thee a walk, and furnish me a good excuse."

Jacques gave the box to his master, whom he was accustomed to obey in all things, without gainsaying. The Justice bore it into his chamber, and looked at it in the light with great curiosity. On the lid was neatly written with red chalk: "For the lovely and beloved Marietta." But Herr Hautmartin well knew that this was only mischief in Colin, and that some knavish trick lurked behind. He therefore opened the box carefully, for fear a mouse or rat were concealed in it. But when he beheld the wondrous cup, which he also had seen at Vence, he was heartily frightened, for Herr Hautmartin was equally experienced in right and wrong, and knew that the inventions and designs of the human heart were evil from youth upward. He saw at once, that Colin designed to bring misfortune upon Marietta, by means of the cup: perhaps to give out, when it was in her hands, that it was a present of some successful lover in the town, or the like, so that all decent people must have kept aloof from Marietta. Therefore Herr Hautmartin resolved, in order to obviate all evil thoughts, to acknowledge himself as the giver. Besides, he loved Marietta, and would gladly have seen her observe more strictly the sayings of the grey-headed priest, Jerome, towards himself, "Little children love one another." In truth Herr Hautmartin was a little child of 50 years old, and Marietta thought the saying applied not to him. On the contrary, mother Manon found that the Justice was a clever little child, had gold and reputation in all Napoule, from one end of the village to the other. And when the Justice spoke of marriage, and Marietta for fear ran away, mother Manon remained sitting and feared not the tall, staid gentleman. It must also be confessed, that there were no defects in his person. And although Colin might be the handsomest man in the village, yet did the Justice far surpass him in two things, namely, number of years, and a great, great nose. Yes, this nose, which always went before the Justice like a herald, to proclaim his approach, was a real elephant among human noses.

With this elephant, his good purpose, and the cup, the Justice went the following morning to the house between the olive trees and African acacias.

"For the beautiful Marietta," said he, "nothing is to me too costly. Yesterday you admired the cup at Vence: allow me to-day, lovely Marietta, to lay it and my devoted heart at your feet."

Manon and Marietta were transported and astounded, when they beheld the cup. Manon's eyes glistened with delight; but Marietta turned and said, I can neither take your heart or cup. Then was mother Manon angry, and cried out:

"But I accept heart and cup. O, thou little fool, how long wilt thou slight thy good luck! For whom waitest thou? Shall a count of Provence make you his bride, that you scorn the Justice of Napoule? I know better how to take care of thee. Herr Hautmartin, I deem it an honor to call you my son-in-law."

Then Marietta went out and wept bitterly, and hated the beautiful cup with all her heart.

But the Justice drawing the palm of his hand over his nose, spoke wisely:

"Mother Manon, hurry nothing. The little dove will at length give way, when it learns to know me better. I am not impetuous. I have some skill among women, and before a quarter of a year passes by, I will insinuate myself into Marietta's heart."

"Thy nose is too large for that," whispered Marietta, who outside the door listened and laughed in secret. In fact, the quarter of the year passed by, and Herr Hautmartin had not even yet pierced her heart with the tip of his nose.

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THE FLOWERS.

But during this quarter of the year Marietta had far other business. The cup gave her much vexation and trouble, and something else besides.

For a time nothing but the cup was talked of in Napoule, and every one said, it is a present of the Justice, and the marriage is already agreed on. But as Marietta had solemnly declared to all her companions, that she would rather plunge to the bottom of the sea than marry the Justice, the maidens continued only the more to banter her, saying, oh how blissful must it be to repose in the shadow of his nose! This was the first vexation.

Then mother Manon had the cruelty to force Marietta to rinse out the cup every morning at the spring under the rock and to fill it with fresh flowers. Thereby she hoped to accustom Marietta to the cup and the heart of the giver. But she continued to hate both the gift and giver. And the work at the spring became a real punishment to her. Second vexation.

Then, when in the morning, she came to the spring, twice every week there laid on the rocks immediately over it, some of the most beautiful flowers, handsomely arranged, all ready for the decoration of the cup. And on the flower stalks was always tied a strip of paper, on which was written, DEAR MARIETTA. Now one need not expect to impose upon little Marietta, as if there were still magicians and fairies in the world. Consequently, both the flowers and sweet notes must have come from Herr Hautmartin. Marietta, indeed, would not smell them because the living breath from out the Justice's nose had perfumed them. Nevertheless, she took the flowers, because they were finer than wild flowers, and tore the slip of paper into a thousand pieces, and strewed them on the spot were the flowers usually lay. But this did not vex the Justice Hautmartin, whose love was unparalleled in its kind, as his nose was in its kind. Third vexation.

At length it came out in conversation with Herr Hautmartin, that in fact he was not the flower giver. Now, who could it be? Marietta was astounded at the unhoped for discovery. Thenceforth she took the flowers from the rock more kindly; but what else? Marietta was, what maidens are not wont to be, very inquisitive. She thought of this and that young man in Napoule. Yet they could not be found out. She looked and listened far into the night; she rose earlier than usual. But she looked and listened in vain. And yet twice a week, in the morning, the wondrous flowers always lay upon the rock, and upon the strip of paper wound round them, was always the silent sigh, DEAR MARIETTA! Such an occurrence would make even the most indifferent inquisitive. But curiosity at length became a burning pain. Fourth vexation.

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WICKEDNESS UPON WICKEDNESS.

Now had Father Jerome on Sunday, again preached from the text: "Wonderful are the dispensations of providence." And little Marietta thought, if providence would only dispense that I might at length find out the flower dispenser. Father Jerome was never wrong.

On a summer night, when it was far too warm for rest, Marietta awoke very early, and could not sleep again. Therefore she sprang joyously from her couch, as the first streaks of dawn flashed against the window of her little chamber over the waves of the sea and the Lerinian Isles, she dressed herself and went out to bathe in the cool spring, her forehead, breast, and arms; she took her hat with her, intending to take a walk along the shore of the sea. She knew too a private place there for bathing.

But in order to reach this retired spot, it was necessary to pass over the rocks behind the house, and thence again downwards, through the orange and palm trees. On this occasion Marietta could not pass through them. For under the youngest and most slender of the palms, lay in profound sleep a tall young man—near him a nosegay of the most splendid flowers. One could easily see thereon a white paper, from which probably again a sigh was breathing. How could Marietta pass by there?

She continued standing, and trembled with fright in every limb. Then she would go home again. Hardly had she retired a couple of steps, ere she looked again at the sleeper, and remained motionless. Yet the distance prevented her from recognizing his face. Now or never was the mystery to be solved. She tripped lightly nearer to the palms. But he seemed to stir. Now she ran again towards the cottage. Yet had his movements been nothing but the fearful imaginings of Marietta. Now she returned again on her way towards the palms. But his sleep might perhaps be only dissembled. Swiftly she ran towards the cottage. But who would flee for a simple perhaps? She trod more boldly the path towards the palms.

With these fluctuations of her timid and joyous spirit, between fright and curiosity, with these to and fro trippings between the house and the palm trees, she had at length always by a few short steps more nearly approached the sleeper, whilst at the same time curiosity became more powerful than fear.

"What concern have I with him? My way leads me directly past him. Whether he sleeps or wakes, I go straight on." So thought Manon's daughter. But she passed not by, but remained standing; for she must look directly in the face of the flower giver, in order to be sure of the fact. Besides he slept as if he had not slept for a month. And who was it? Now, who else should it be, but the arch wicked Colin!

So it seems he had been the one, who first on account of his old enmity had given the gentle maiden so much annoyance with the cup, and had brought her into the loathsome contact with Herr Hautmartin; he had been the one who had teased her with flowers, in order to torture her curiosity. Wherefore? He hated Marietta. He behaved himself always in all companies, towards the poor child most shamefully. He avoided her when he could; and when he could not, he grieved the good natured little one. With all the other maidens of Napoule was he more chatty, friendly, courteous, than towards Marietta. Consider, he had never once asked her to dance, and yet she danced bewitchingly.

Now he lay there surprised, taken in the act. Revenge swelled in Marietta's bosom. What disgrace could she subject him to? She took the nosegay, unloosed it, strewed with just scorn his present over the sleeper. Only the paper, on which appeared again the sigh, dear Marietta, she retained, and thrust quickly into her bosom. She wished for future need to preserve this proof of his handwriting. Marietta was sly. Now she would go away. But her revenge was not yet satisfied. She could not leave the place without punishing Colin's ill will in a similar manner. She took the violet colored silken ribbon from her hat, and threw it lightly around the sleeper's arm and around the tree, and with three knots tied Colin fast to the tree. Now when he awoke, how astonished would he be? How would his curiosity torment him to ascertain who had played him this trick? That he could not possibly discover. So much the better; it served him right.

Marietta had only been too lenient towards him. She seemed to regret her work when she had finished it. Her bosom throbbed impetuously. Indeed, I believe that a little tear filled her eye, with which she all too compassionately gazed upon the guilty one. Slowly she went back to the orange trees at the rocks—often she looked around—slowly ascended the rocks, often looking down among the palm trees. Then she hastened to mother Manon who was calling her.

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THE HAT RIBBON.

That very day Colin practised new mischief. What did he? He wished to shame the poor Marietta publicly. Ah! she never thought that every one in Napoule knew her violet colored ribbon! Colin knew it but too well. Proudly he bound it round his hat, and exhibited it to the gaze of all the world as a conquest. And male and female cried out "He has received it from Marietta." And all the maidens said angrily "The reprobate." And all the young men who liked to see Marietta, cried out "The reprobate."

"How! mother Manon?" shrieked the justice Hautmartin, when he came to her house, and he shrieked so loudly, that it re-echoed wonderfully through his whole nose. "How! do you suffer this? that my betrothed presents the young proprietor Colin with her hat band? It is high time that we celebrate our nuptials. If it is done, then I shall have a right to speak."

"You have a right!" answered mother Manon, "if things are so, the marriage must be forthwith. When that is done, all is done."

"But mother Manon, Marietta always refuses to give me her consent."

"Prepare the marriage feast."

"But she will not even look kindly at me; and when I seat myself at her side, the little savage springs up and runs away."

"Justice, only prepare the marriage feast."

"But if Marietta resists."

"We will take her by surprise. We will go to father Jerome on Monday morning, early and quietly shall he celebrate the marriage. This we can easily accomplish with him. I am her mother. You the first Judicial person in Napoule. He must obey. Yet Marietta need know nothing about it. Early on Monday morning I will send her to Father Jerome all alone, with a message, so that she will suspect nothing. Then shall the Priest speak to her heart. Half an hour afterwards we two will come. Then swiftly to the altar. And even if Marietta should then say no, what consequence is it? The old Priest can hear nothing. But till then, mum to Marietta and all Napoule."

So the secret remained with the two. Marietta dreamed not of the good luck which was in store for her. She thought only of Colin's wickedness, which had made her the common talk of the whole place. Oh! how she repented her heedlessness with her ribbon; and yet in her heart she forgave the reprobate his crime. Mari-

etta was far too good. She told her mother, she told all her playmates, "Colin has found my lost hat band. I never gave it to him. Now he wishes to vex me with it. You all know Colin has always been ill-disposed with regard to me, and has always sought how he could mortify me!"

Ah! the poor child! she knew not what new abomination the malicious fellow was again contriving.

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THE BROKEN CUP.

Early in the morning went Marietta with the cup to the spring. There were no flowers yet on the rock. It was still quite too early; hardly had the sun risen from the sea.

Then footsteps were heard. Then came Colin; the flowers in his hand. Marietta became blood red at the sight. Colin stammered out "good morning, Marietta," but the greeting came not from his heart, he could hardly bring it over his lips.

"Why do you wear my ribbon so publicly, Colin?" said Marietta, and placed the cup upon the rock. "I did not give it to thee."

"Thou didst not give it to me, dear Marietta?" asked he, and became deadly pale with inward rage.

Marietta was ashamed of her falsehood, drooped her eyelids, and said after a while, "Well, I did give it to thee, yet you should not have worn it for a show. Give it me back again."

Then slowly he unloosed it; his anger was so great that he could not prevent the tears filling his eyes, nor the sighs escaping his breast. "Dear Marietta, leave thy ribbon with me," said he softly.

"No," answered she.

Then his repressed passion changed into despair. He looked sighing towards Heaven, then sadly at Marietta, who silent and abashed, stood by the spring with cast down eyes.

He turned the violet colored ribbon around the stalks of the flowers, said "there, take all together," and threw the flowers so spitefully against the magnificent cup upon the rock, that it was thrown down upon the ground and dashed to pieces. Maliciously he fled away.

Mother Manon lurking behind the window, had seen and heard all. But when the cup was broken, hearing and seeing left her. She was hardly able to speak for very horror. And as she pushed with all her strength against the narrow window, to shout after the guilty one, she threw the window down upon the stones beneath, so that with frightful noise it struck the earth and was shattered into pieces.

So much ill luck would have discomposed any other woman. But Manon soon recovered herself. "How lucky, that I was a witness of his roguery!" exclaimed she; "he must to the Justice. He shall replace both cup and window sash with his gold. It will give a rich dowry to Marietta." But when Marietta brought in the fragments of the shattered cup, when Manon saw the Paradise lost, the good man Adam without a head, and of Eve not a solitary limb remaining, the Serpent unhurt, triumphing, the tiger safe, but the little lamb gone even to the very tail, as if the tiger had swallowed it, then mother Manon screaming, broke forth into curses against Colin, and said "one can easily see that this fall came from the hand of the Devil."

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THE TRIBUNAL.

And she took the cup in one hand, Marietta in the other, and went about nine o'clock to Herr Hautmartin where he was wont to sit in judgment. Then made she her complaint with loud cries, and showed the broken cup and the Paradise lost. Marietta wept bitterly.

The Justice when he saw the broken cup and the beautiful bride in tears, flew into so violent a rage towards Colin, that his nose was as violet colored as Marietta's celebrated hat band. He immediately despatched his bailiffs to bring the criminal before him.

Colin came overwhelmed with grief. Mother Manon now repeated her complaint with great eloquence, before justice, bailiffs and scribes. But Colin listened not. He stepped to Marietta and whispered to her "forgive me, dear Marietta, as I forgive thee. I broke your cup unintentionally; but thou, thou hast broken my heart."

"What whispering is that?" cried out with majesterial authority, Herr Hautmartin. "Hearken to your accusation, and defend yourself." "I have nought to defend." "I broke the cup against my will," said Colin.

"That I verily believe," said Marietta sobbing; "I am as guilty as he; for I offended and angered him. Then he threw the flowers to me incautiously. He could not help it."

"Eh, pray look at me!" cried mother Manon, "will the maiden be his defender? Herr Justice, pronounce the sentence. He has broken the cup, that he denies not; and I, on his account, the window—will he deny it? Let us see."

"Since you cannot deny it, Herr Colin," said the Justice, "you must pay 300 livres for the cup, for it is worth that; and then for"—

"No," interrupted Colin, "it is not worth so much. I bought it at Vence at the Fair, for Marietta, for 100 livres."

"You bought it, Sir brazen face?" shrieked the Justice, and his whole face became like Marietta's hat band. Yet he could or would not say more, for he dreaded disagreeable investigations of the matter.

But Colin was excited by the reproof, and said, "I sent this cup on the evening of the Fair, by your own servant, to Marietta. There stands Jacques in the door. He is a witness. Speak Jacques, did I not give thee the box to carry to the Frau Manon?"

Herr Hautmartin wished to interrupt this conversation by speaking loudly. But the simple Jacques said, "only recollect Herr Justice, you took from me Colin's box, and carried what was in it to Frau Manon. The box lies even now, there under the papers."

Then the bailiffs were ordered to remove the simpleton; and also Colin was thrust out, until he should be called in again.

"Very well, Herr Justice," interposed Colin, but this business shall be your last in Napoule. I know much more than this, that you would ingratiate yourself with Frau Manon and Marietta, by means of my property. When you seek me, you will do well to ride to Grasse to the Governor's." With that, Colin departed.

Herr Hautmartin was much puzzled with this result, and in his confusion, knew not what he did. Frau Manon shook her head. The affair was dark and mysterious to her. "Who will now pay me for the broken cup?" she asked.

"To me" said Marietta, with glowing, cleared up countenance, "to me it is already paid for."

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WONDERFUL DISPENSATIONS.

Colin rode that same day to Grasse to the Governor, and came back early the next morning. But Herr Hautmartin only laughed at him, and removed all Frau Manon's suspicions, and swore he would let his nose be cut off, if Colin should not pay 300 livres for the broken cup. He also went with Frau Manon to Father Jerome on the subject of the marriage, and impressed upon him, that he should earnestly set before Marietta her duty, as an obedient daughter, not to oppose the will of her mother and her marriage. This the pious old man promised, although he understood not the half of what they shouted in his ear.

But Marietta took the broken cup into her bed chamber, and now first truly loved it; and it was, as if Paradise were planted in her bosom, since it had been destroyed on the cup.

When now Monday morning came, mother Manon said to her daughter, "dress yourself handsomely, and carry this myrtle wreath to Father Jerome; he wants it for a bride." Marietta dressed herself in her Sunday clothes, took without suspicion the myrtle wreath, and carried it to Father Jerome.

On the way, Colin met her, and greeted her friendly though timidly; and when she told him where she carried the wreath, Colin said, "I am going the same way, for I am taking to the Priest the money for the Church's tenths." And as they went on, silently he took her hand, and both trembled as if they designed some great crime against each other.

"Hast thou forgiven me," whispered Colin anxiously. "Ah! Marietta, what have I done to thee, that thou art so cruel towards me?"

But she could only say, "only be quiet Colin, you shall have the ribbon again; and I will preserve the cup, since it came from you?"

"Ah! Marietta, can you doubt it? All I have I would gladly give you. Wilt thou hereafter be as kind to me, as thou art to others?"

She replied not. But as she entered the parsonage, she looked aside at him, and when she saw his fine eyes filled with tears, she whispered softly, "dear Colin!" Then he bent down and kissed her hand. With this, the door of a chamber opened, and Father Jerome with venerable aspect, stood before them. The young couple had nearly fallen from giddiness, for they held fast by each other. I know not whether from the effect of the hand kissing, or the awe they felt for the sage.

Then Marietta handed him the myrtle wreath. He laid it upon her head and said "Little children, love one another;" and then urged the good maiden in the most touching and pathetic manner, to love Colin. For the old gentleman had from his hardness of hearing, either mistaken the name of the bridegroom, or through defect of memory, forgotten it, and thought Colin must be the bridegroom.

Then Marietta's heart softened under the exhortation of the venerable Father, and with tears and sobs she exclaimed, "Ah! I have loved him for a long time, but he hates me."

"I hate thee, Marietta?" cried Colin, "my soul lives only in thee, since you came to Napoule. Oh! Marietta, how could I then hope and believe that thou lovest me? Does not all Napoule worship thee?"

"Why then dost thou avoid me Colin, and prefer all my companions before me?"

"Oh! Marietta, I fell into fear and trembling with love and anxiety when I beheld thee. I had not the courage to approach thee; and when I was away from thee, I was wretched."

As they talked thus together, the good Father thought they were quarreling; and he threw his arms around them, brought them together, and said imploringly, "Little children, little children, love one another."

Then sank Marietta on Colin's breast, and Colin threw his arms around her, and both faces beamed in beautiful radiance. They forgot the priest, the whole world. Colin's lips hung upon Marietta's sweet mouth. It was indeed only a kiss, but a kiss of sweetest annihilation. Each was lost in the other. Both had so completely lost their recollection, that unwittingly, they followed the delighted Father Jerome into the church and before the altar.

"Marietta!" sighed he.

"Colin!" sighed she.

In the church there were many worshippers praying; but with astonishment they were witnesses of Colin's and Marietta's marriage. Many ran out before the close of the ceremony, to spread the news right and left through Napoule; "Colin and Marietta are married!"

When the solemnization was over, Father Jerome rejoiced honestly, that he had succeeded so well; and that such little opposition had been made by the parties. He led them into the parsonage.

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END OF THIS MEMORABLE HISTORY.

Then came mother Manon, breathless; she had waited at home a long time for the coming of the bridegroom. He had not arrived. At the last stroke of the clock, curiosity had overmastered her: and she had taken the road to Herr Hautmartin's. But then new astonishment came upon her. She learned that the Governor, together with the officers of the Viguerie, had appeared, had taken possession of the accounts, chests and papers of the Justice; and at the same time arrested Herr Hautmartin.

"This surely is the work of that wicked Colin," was her thought. Now she hurried to the parsonage, in order to apologize to Father Jerome, for the delay of the marriage. Then the good gray-headed old man advanced towards her proud of his work, leading by the hand the new married pair.

Now in good earnest mother Manon lost both thought and speech, when she learned what had happened. But Colin had more thought and power of speech, than ever in his whole life. He began with his love and the broken cup, and the falsehood of the Justice, and how he had unmasked this unjust magistrate at Grasse in the Viguerie. Then he besought mother Manon's blessing, since it was done, without any fault on the part of Marietta or himself.

Father Jerome, who for a long while could not make out what had happened, when he learned the full explanation of the marriage, through mistake, piously folded his hands and exclaimed with uplifted eyes, "Wonderful are the dispensations of Providence." Colin and Marietta kissed his hands; mother Manon through sheer veneration of Heaven, gave the young couple her blessing, but remarked incidentally, that her head seemed turned round.

"But am I then really a wife?" asked Marietta, "and really Colin's wife?"

Mother Manon nodded her head, and Marietta hung upon Colin's arm. Thus they went to Colin's farm, to his dwelling house, through the garden.

"Look at the flowers, Marietta," said Colin, "how carefully I cultivated them for your cup?"

Colin who had not expected so pleasant an event, now prepared a wedding feast on the spur of the occasion. Two days was it continued. All Napoule was feasted. Who shall describe Colin's rapture and extravagance? Frau Manon herself was pleased with her son-in-law, as she came to know the full extent of his property, and especially when she found that Herr Hautmartin and his nose had been taken as a prisoner to Grasse.

And the broken cup is preserved in the family, even to the present day, as a memorial and relic.

## FRIEDRICH VON SCHLEGEL.

[Translated from "*Die Romantische Schule von H. Heine*," by HORACE B. WEBSTER.]

FRIEDRICH VON SCHLEGEL was a profound man. He knew all the glory of the past, and felt all the sorrows of the present. But he knew not the sacredness of these sorrows, and their necessity for the future prosperity of the world. He saw the sun go down, and looked sadly towards the place of its setting, and mourned over the night-like darkness which he saw drawing on: and he observed not a new dawn illuminating the opposite heaven. F. Schlegel once called a historian "a prophet reversed." This term is the best definition of himself. The present was hateful to him, the future alarmed him, and only to the past, which he loved, was his striking prophetic look turned.

Poor Friedrich Schlegel, in the sorrows of our age, saw not the pangs of a second birth, but the agonies of death. * * * "*The Lucinda*," is a romance, and with the exception of his poems, and a drama imitated from the Spanish, called Alarkos, this romance is the only original creation which F. Schlegel has left behind him. Praises of this romance were not wanting; nor critics who extolled this work as a master-piece, and who prophetically decided, that it was the best book in German literature. But the gods have preserved our literature from this misfortune. Lucinda is the name of the heroine of this romance, and she is a wanton, witty woman, or rather a mixture of wantonness and wit. The Virgin Mary may pardon the author for having written this book, but the muses will never forgive him.

The most celebrated works of F. Schlegel, are "The Language and Wisdom of the Indians," and his "Lectures upon the History of Literature." In the first mentioned book, he has not merely introduced the study of Sanscrit among us, but has also established it. He was for Germany, what Sir William Jones was for England. He has studied Sanscrit in the most genial

manner, and the few fragments which he has introduced in this work, are masterly translated. By his deep intuitive power he discerned the signification of the epic versification of the Indians, the Sloka, which flows therein, as broadly as the Ganges, the clear, holy stream.

In the Lectures upon Literature, F. Schlegel surveys the whole field of literature from a high point of view, but this lofty spot is still the belfry of a Catholic Church.* And in all that Schlegel says, we hear the tolling of these bells: frequently, indeed, the croaking of the church ravens, as they flutter around him. Despite, however, this fault, I know no better book of its class. Only by the collection of the labors of Herder on this subject, could we acquire a better survey of the literature of all nations. For Herder sat not as a literary Great Inquisitor in judgment upon different nations, and condemned or absolved them according to their degree of faith. No: Herder considered the whole human race as a mighty harp in the hand of the great masters, every nation seemed to him a distinctly tuned chord of this gigantic harp, and he conceived the universal harmony of their different sounds.

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[For the Northern Light.]

## METHOD OF DISTRIBUTING THE CROTON WATER.

BY C. W. HACKLEY.

THE great work for the supply of the city of New-York with water from the Croton river, has been often enough noticed in a general way. There is a point of view, however, in which it may be presented to the readers of the Northern Light, in which it will appear not as matter for mere vague wonder, but of useful information.

An opportunity rarely occurs for exhibiting the application of such principles as are involved in the construction of this work on so extended a scale. It may not be amiss, therefore, to take advantage of it for setting them forth for the benefit of those who may not, like ourselves, have enjoyed the opportunity of personal inspection. We are indebted to the politeness of the intelligent and scientific superintendent, Mr. NORRIS, for the gratification of our curiosity as to the manner of distributing the water through the city, after it reaches the great reservoir, and it is to that part of the work that we propose to confine ourselves in the present article.

With the dispute between the Water Commissioners and the Corporation, respecting their mutual claims to a control of the work within the bounds of the city, and the comparative propriety of conflicting plans, we have nothing to do. Our object is simply to describe the manner in which the pipes, through which the water is distributed, are actually being laid down. This is matter of history, and as such, cannot fail to be interesting to the general reader not only, but to the man of practical science, who will be able to compare the results when the whole shall have been subjected to trial, with the principles upon which the construction has been made, and thus arrive at a more just and certain criticism than any a-priori reasoning, which can never foresee all the facts of the case, could possibly embrace.

We shall first give a sketch of the general course and size of the water-pipes, to which we shall add the formulæ from which the relations of the various parts were calculated, and then describe some of the details of the work.

The water is brought from the great reservoir on Murray Kill, in three principal arteries, the main one passing down Broadway, through the whole length of the city; and the other two, the one on the east side through Third Avenue and Avenue A, and the other on the west side through Eighth Avenue and Hudson-street.

The water which passes through Broadway is carried in a pipe of thirty-six inches in diameter as far down as Canal-street; thence as far as Fulton-street in one of thirty inches; and thence finally in one of twenty inches to the Bowling Green.

The side mains, as they are termed, are somewhat smaller, and diminish in a similar manner.

Either of these three would alone furnish the city with a tolerable supply of water. They communicate with one another by cross mains, of which there are five, so if that two of the three longitudinal mains should, from any cause, be shut off, the third would send water through them, whilst, by the number of cross mains, these could be used both above and below the part shut off. The cross mains also answer the purpose of branches to carry the water to the parts of the town intermediate to the longitudinal mains.

The first of these cross mains runs through Fourteenth-street, or thereabouts, from river to river. The pipe is twenty inches in diameter, diminishing after it intersects the exterior longitudinal mains. The second is through Houston-street, from Broadway to East river, the west branch of which, as it may be considered, passes along Canal-street to the North river. The third runs through Chamber and Chatham-streets, connecting with an old pipe in the Bowery, laid before the present plan was projected. The fourth is through Fulton-street, from river to river, of a diameter of sixteen inches; and the fifth and last of the cross mains passes through Wall-street, from Broadway to the East river, and is of the same diameter as the last. The remaining pipes for distributing the water from the main leaders already mentioned, are of two sizes only, twelve and six inches, and are arranged as follows:

An area of about 2,000 feet square is surrounded with the larger kind, viz. twelve inches, from the opposite lines of which the lines of six inch pipe run through the streets between; so that in the regular parts of the city there will be large parallelograms of twelve inch pipe, each filled up with a number of small parallelograms of six inch pipe. The latter do not communicate with each other, but where they cross at the intersection of streets one passes under the other, in order that the exhaustion of one may not exhaust the others in the immediate vicinity.

This arrangement is particularly advantageous for the use of the hydrants, as will be seen when we come to speak of the disposition of them. The diameter of pipes leading to hydrants is four inches, and of pipes for the supply of separate houses from one to three inches.

The elementary problem which presents itself in the air, may be best solved by assuming the diameter of the pipe, and finding the distance which it will supply.

A six inch pipe will be found in this way to supply a distance of half a mile without requiring a velocity greater than one foot per second.

The formula for the velocity required for a given diameter of pipe and a given distance to be supplied, is as follows. The manner in which it is derived is sufficiently evident from inspection.

$2n$ = the number of tenements;
$q$ = the quantity which each consumes per day;
$Q$ = whole quantity consumed in a length of street D;
$f$ = the front of each tenement in feet;
$S$ = the quantity in cubic feet used in one second in a length of street D;
$d$ = the diameter of the pipe in inches;
$\delta$ = diameter of pipe in feet;
$v$ = velocity of water in feet per second.

Then,

$$n = \frac{D}{f} \qquad v = \frac{2qD}{\frac{d^2}{f} \times ,7854 \times 43200}$$

$$Q = 2nq$$

$$S = \frac{Q}{60.60.12}$$

Assuming the quantity consumed by each tenement to be 168 gallons, or 28 cubic feet, daily, which has been found in Philadelphia to be a liberal allowance, and taking 25 feet for the front of each house, the above becomes,

$$S = \frac{D}{19286} \qquad v = \frac{D}{d^2\ 105.2} \text{ or } v = \frac{D}{\delta^2\ 15147}$$

if $d = 4$ then $v = \frac{D}{1683}$ if $d = 10$ then $v = \frac{D}{10520}$

$d = 6$ $v = \frac{D}{3787}$ $d = 12$ $v = \frac{D}{15147}$

$d = 16$ $v = \frac{D}{26931}$ $d = 30$ $v = \frac{D}{94680}$

$d = 20$ $v = \frac{D}{42080}$ $d = 36$ $v = \frac{D}{136343}$

$d = 24$ $v = \frac{D}{60588}$

A velocity of six inches per second is used. The variables in the above formula are the diameter of the pipe and the distance to be supplied, the limit of the velocity being constant. It is more convenient to assume the diameter of the pipe for several reasons. To vary the distance supplied is perfectly easy in practice, whereas the varying of the diameters continually, would be attended with increased trouble and expense in the manufacture, and in making repairs.

We add another formula derived from experiments made in France, which gives the greatest velocity that can be obtained with a given head of water running through pipes.

$$v = \frac{\sqrt{ng}\ (\sqrt{d} - 0.1)}{\sqrt{s} - L\sqrt{s} + 1.6} - 0.3\ (\sqrt{d} - 0.1)$$

In numbers English measure,

$$v = \frac{307\ (\sqrt{d} - 0.1)}{\sqrt{s} - L\sqrt{} + s + 1.6}$$

in which

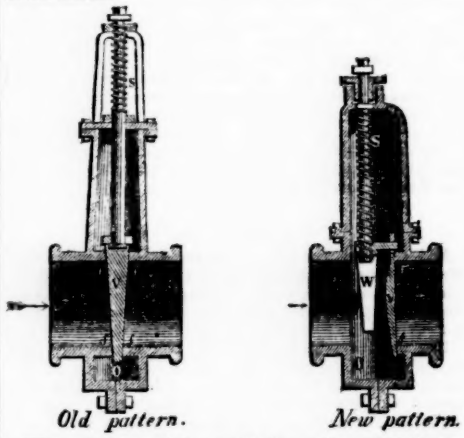
$v$ = velocity in inches per second;
$d$ = hydraulic mean depth, *i. e.* the quotient of section divided by the area;
$s$ = slope of pipe or surface of current, *i. e.* expanded length of pipe (not projection) divided by the difference of height of the two extremities.

$g = 32\ 2\text{-}10$ feet, n, an abstract number determined by experiment to be 343.7.

L signifies hyperbolic logarithm of the quantity before which it is placed = com. log. multiplied by 2.3026.

With respect to the details of the pipes themselves, we shall say but a word. They are of cast iron, of one uniform length, viz. nine feet. Their thickness is determined by weight, each kind weighing just half as many hundreds as its diameter in inches. Thus, the six inch pipe weighs three hundred, &c. The largest sizes are somewhat heavier in proportion. The plan for fastening them together at first adopted, was by means of flanges at the ends, held together with screws and nuts. The contraction of the iron, however, was sufficient to break these, and the present method was adopted instead, which consists in a joint formed by an enlargement of both the interior and exterior diameter of each pipe at one end, into which the opposite end of the next pipe slips, and making the joint tight by running in lead, which is afterwards rammed. The ramming sometimes occasioned the chipping off of the end of the pipe, to obviate which, a sort of astragal finish was made to terminate the enlargement. The thickness of the pipes depends not only upon the pressure of the water, but also upon the amount of oxidation, and was adopted from the experience of Philadelphia. Each pipe is whitewashed thoroughly just previous to its being laid down. The advantage of this was accidentally discovered in Philadelphia. Some pipes were there laid by chance in some old rubbish of mortar, which were found, on taking them up some years subsequently, to be quite fresh and unoxidised. This was supposed to be attributable to the lime rather than the sand. An experiment was accordingly made, and it was found that pipes washed with lime, on being examined, ten years afterward, had still the blue scale of the furnace upon them.

The water is shut off when necessary by a contrivance, of which two kinds have been invented. The first was found to have defects, which were remedied in the second.



*Old pattern.* *New pattern.*

The properties of the two kinds are here given in parallel columns.

OLD PATTERN.

The screw S is exposed outside of the enclosed part, and subject to rust, and to get clogged with dirt.

The valve V, or cover, when shut, as in the figure, is strongly wedged in between the two faces, *f f f f*.

When it is necessary to open it the valve is often found to stick in its place, and if force is applied, frequently breaks in some part. An instance may now be seen in the Sixth Avenue, where the old pattern has to be taken up, having broken and become useless.

The sand and sediment of the water settle into the space O, fill it up and prevent the valve from falling down to its place. Sand once in the space, cannot be removed without taking up the stopcock.

The old pattern is continually a source of trouble and expense, from its getting out of order. Several, in different parts of the city, require to be taken out and be replaced by a better article.

NEW PATTERN.

The screw S is inside of the enclosed part, immersed in fresh water, and hence not liable to rust.

The valve V is firmly brought up against the face, *f f*, by means of the wedge W, acted on by the screw S.

The wedge W is always easily started by the screw, and then the valve being loose is raised without difficulty.

The space O is so open that the current of water will always keep it clear.

The new pattern has always been found to work effectually; some hundreds are in use, and but two or three repairs, and those not costing above $4 or $5 each, have been necessary

We come now to describe the hydrants, to the arrangement of which, allusion has already been made. One of these is placed at the corner of each block, but instead of those adjoining being placed in the same

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* The irreverence of Heine, is a deep blot upon the brilliancy of his genius. It is thus referred to in the London Quarterly Review of Feb., 1835.

"Within the last five years a new star has appeared in the literary hemisphere—malign in its influence, wavering in its orbit, and unsteady in its light, but sparkling all over with a brilliancy, which soon occasioned all eyes and glasses to be turned upon it. Henry Heine came out as a poet and prose writer—first with his *Reisebilder*, next with his Contributions towards the Literary History of his contemporaries—and speedily gained for himself the reputation of being one of the cleverest, if not wittiest, authors of his day. We say for himself—no man having ever been more exclusively the architect of his own reputation than Heine; for in starting he wantonly provoked a whole host of detractors by his impertinences—and by his hardly concealed contempt for existing creeds and establishments, he has often managed to reduce even his most ardent admirers to the condition of apologists. At the present moment, he is regarded as a regular outlaw, a downright *caput lupinum*, in the literary circles of Germany, where 'his hand is against every man, and every man's hand is against him.'

"Yet we believe him to be possessed of many noble and generous qualities (as, indeed, what man of true genius is not?)—we are told that he is now eagerly striving to work himself pure and nourish a strong hope that he will come round, ere long, to a due sense of the evil of his ways."

pipe, they are alternated. Thus, head enough is preserved to throw the water over the highest house, whereas if the pipes all communicated, the jet would immediately diminish to a height of from ten to twenty feet. The hydrant is placed always on the northwest corner, as being most sheltered from the wind, and most exposed to the sun. The hydrant consists of a vertical tube set in the pipe, at the bottom of which is an iron valve without hinge, moved up by a rod passing from it to the top of the hydrant, and raised by a screw. In order to prevent the water from freezing in the hydrant, a small valve opens in an elbow at the bottom, which allows the water to escape. This small valve is opened by the large valve striking the end of a lever as it descends.

The above are all the elements of importance in the part of the work which we have attempted to describe.

It will be perceived that abundant provision is made for the supply under almost any contingency, of water sufficient for all the purposes of health, cleanliness and safety. Whilst this great object is secured by ample safeguards, the additional expense of such an arrangement, indispensable to its attainment, is counterbalanced by the advantages of water-power, dying, and other manufacturing purposes, which may be gained when, as will ordinarily be the case, there is no interruption to a regular and plentiful supply. The increase of manufactures of various kinds in the city is a benefit to be derived from the Croton work not ordinarily contemplated, which, however, is no small item of its value.

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[For the Northern Light.]

## ON PHILOLOGY.

BY NOAH WEBSTER.

In the great efforts now making to improve education, much attention is given, and with good effect, to the construction of suitable buildings for schools, and to the manner of teaching. But the principal solicitude seems to be to learn *how* to teach, rather than *what* to teach. This observation is applicable chiefly to instruction in our vernacular language.

In consequence of the general neglect of English philology in Great Britain for a century past, the knowledge of the origin of words and of their primary signification, is, to this day, very generally superficial. We have numerous books for teaching the language, but most of them containing new editions of old mistakes, or old usages now obsolete.

Several English dictionaries of modern publication, compiled by men who have not dared to risk their popularity by deviating from Johnson, retain the old spelling, as in *musick*, *publick*, and in *errour*, *superiour*; a spelling which, for half a century past, has been corrected in almost every respectable publication, both in Great Britain and in the United States. Upon the authority of these dictionaries, several spelling books have been compiled with this orthography, and introduced into schools. These books are used chiefly in the State of New-York. It is not a little surprising that one-third of the children in that great State should be subjected to the necessity of learning an orthography, which they must certainly abandon in after life. That old spelling can never be generally revived.

The use of Walker's Dictionary, as a standard of pronunciation is less surprising, as the work was at first represented to be the standard in England. This was a mistake. No universal standard is admitted in England; the higher classes of society rarely consult a book to learn pronunciation, and still more rarely do they follow any particular books. Pronunciation is in England regulated almost wholly by the usage of the higher orders of men.

Most of the English orthoepists incline to favor the pronunciation of stage-players, and of fashionable people who adopt it. But there are some classes of words in which the nation do not follow the stage. Several writers on orthoepy, more recent than Walker, utterly condemn his pronunciation of several classes of words.

From several months' residence in England, and from frequent intercourse with literary characters and others in London and Cambridge, I found that, with few exceptions, the pronunciation of words in England is *precisely the same as my own*, and in accordance with that of educated men throughout New-England. In some of the words, in which the English differ from us, the pronunciation in this country agrees better than the English with analogy and orthography; in other cases, there seems to be no good reason for preferring one mode to another, and either mode is considered as respectable.

In etymology, there is no English dictionary which is not extremely superficial, and defective; and in a multitude of words, erroneous. Dr. Johnson was cautious and judicious; he had never investigated the origin of English words, to any great extent; and he rarely ventured beyond his depth.

Very different has been the course pursued by Richardson. This author cites as authorities the "Elders of Lexicography," as he calls them; Junius, Skinner, Minshaw, Vossius and Wachter; but he has relied much on Horne Tooke. The "Elders" never ascended to the true sources of knowledge, on this subject; they were wholly unacquainted with the primary and most important principles on which languages are formed, and had no knowledge of several of the languages from which English words are derived. Horne Tooke unfolded some important facts in etymology; but his researches were limited, and much of his *Diversions of Purley* consists of hasty conjectures. His work abounds with mistakes. Richardson has given us the opinions and vague conjectures of these authors; but many of his etymologies are so erroneous as to be ridiculous. So numerous are the mistakes of the "Elders" which he has communicated, as to render the publication of them in this country an injury to our literature.

From these or other superficial authors, Salem Town seems to have borrowed many of his explanations of the prefixes and suffixes of English words, in his Analysis of Derivative Words. Many parts of this work are correct and valuable; some parts of it are superfluous and useless; other parts of it erroneous. Take the following examples:

The final letter *y* the author considers as giving three different senses; as in *slavery*, *factory*, and *wealthy*. But *y* in *factory* is from a source wholly distinct from *y* in *wealthy*.

The terminating syllables *ly*, *vic*, *dom*, *ling*, *hood*, *some*, *full*, *less*, the author tells us are from the German. He might with equal truth have said, that the German corresponding words are derived from the English. All the Teutonic languages are of one stock; all equally ancient; and no one is derived from the other. The terminating words and syllables above mentioned are all *native* words; all English and Saxon; and the author's mistakes ought not to enter our schools.

The author says the termination *ment* is from the French; but it is from the Latin, often but not always through the French.

*Dom*, says the author is from the German *thum*, implying a *collection* of things. This is all a mistake.

*Able*, the author tells us, Horne Tooke derives from the Gothic *abal*, strength. This derivation is a gross mistake.

The author tells us that the terminations *sion* and *tion* are sometimes formed from Latin nouns by the addition of *n* to the nominative case, as in *natio*, *nation*. This is a mistake. The nominative case in this class of words, as in others, is contracted by the loss of *n*. The fact is directly the reverse of what the author supposes.

The author tells us that *ght* in English are the equivalent for the German *cht*. But these letters are neither a prefix nor suffix, and have nothing to do with this subject.

*Ling*, the author says, is borrowed from the German, which is a mistake; and he says further, that it is commonly used as a *diminutive*. This is not correct: *Firstling*, *darling*, *hireling*, *fatling*, *worldling*, and others, are not diminutives.

There are other mistakes in this work, which I will omit.

The grammars of the English language are so incorrect, that in my view, it would be well not to use them in schools; but let children learn the language by reading good authors. In this way, their language would be generally, though not always, correct; but they would not waste time and labor in learning what is not true.

It is a great fault in many of our schools, that pupils are hurried forward too fast, without being well drilled in the rudiments of the language. Another fault is, the imposition, upon the pupils, of too many studies at once. The proper course of instruction is, as Locke has observed, to teach one thing at a time. It is this practice of hurrying children forward in their studies, which has led to the attempts to teach them spelling and definition at the same time. This practice can succeed only in the explanation of familiar words; it can not be useful, in defining abstract terms, in the first stages of learning. And the attempt to define words by their synonyms, to be useful, must be conducted by persons far more competent than teachers in general; or it will do more harm than good.

When I consider the low state of English philology in Great Britain, as well as in this country; when I see the French *controlleur*, from *contre* and *rolle*, a counter register, converted by a blunder into *comptroller*, a computer of registers, and this nonsensical title given to an officer of the treasury, by congress and some of the states, and disfiguring the public laws and records; when I see that a mistake of the origin of the word *fee* has led the English nation to explain the feudal system on wrong principles; when I see such words as *disannul*, *unloose*, and *handy work*, two of which are nonsense, and the other a mistake that perverts the Scripture; such words, I say, continue in the common version of the Scriptures age after age; little hope can be entertained that our language can ever be purified from errors. It certainly can not be done, without more scholarship and more good taste, than our literature now exhibits.

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[For the Northern Light.]

## MEASURING HEIGHTS BY THE THERMOMETER.

BY WILLIS GAYLORD.

It is well known that the barometer is the instrument generally used for determining elevations, and has proved of the greatest value for this purpose, in the hands of such men as Humboldt, Boussingault, Webb, and Sabine. There are, however, some disadvantages attending it, which render observations by the most experienced men, liable to differ at different times—disadvantages inseparable from the nature and construction of the instrument. It is also expensive, difficult of repair, liable to accidents from transportation, and while as a standard of atmospheric pressure it will probably never be superseded, it has long been a desideratum among scientific men, that some instrument should be devised for measuring heights, more portable, and less liable to error in observation than the barometer. This seems, in a great measure, to have been accomplished by a new adaptation of the thermometer to this purpose. The principle on which the instrument is constructed is founded on the simple and well known fact, that *water boils at a less degree of heat in proportion to its elevation*.

When water is exposed to the action of heat its temperature gradually rises until it boils, after which the temperature cannot, in a free state, be increased. This temperature at the level of the sea, and the barometer at 30 inches is 212° of Fahrenheit, and at this point the atmospheric pressure is equivalent to a weight of fifteen pounds on every square inch. Water heated in vessels from which the steam or heated vapor cannot escape, can have its boiling point much more elevated. In experiments to prove this, Papin's digester is used, and with its aid, water has been heated to 400°, and according to Muschenbroek and Marcet, it can be made in this way to melt tin, which requires a temperature of 442°.

This quality of water, or its tendency to boil at a less degree of heat in proportion to its elevation, has long been known, and Saussure made some efforts to measure heights by the immersion of the thermometer in it, and he thus found the height of Mont Blanc to be 15,000 feet. In this experiment the water boiled at a temperature of 178° or 34° below the temperature at the surface of the sea. Little importance was, however, attached to these experiments, which were repeated by Saussure and others on the Pic Du Dome, and on the Pyrenees; and the barometer continued to receive the preference as an instrument for determining elevations.

Gen. Roy, in the prosecution of his trigonometrical observations connected with the measurement of a degree, instituted a set of experiments to determine the temperature at which water boils at the different heights of the barometer, and the following table is a statement of the results obtained by him:

| Barometer. | | Boiling point. |
|---|---|---|
| 26 | inches, ..... | 204 91 |
| 26.5 | " ..... | 205.79 |
| 27 | " ..... | 206.87 |
| 27.5 | " ..... | 207.55 |
| 28 | " ..... | 208.48 |
| 28.5 | " ..... | 209.31 |
| 29 | " ..... | 210.19 |
| 29.5 | " ..... | 211.07 |
| 30 | " ..... | 212.00 |
| 30.5 | " ..... | 212.88 |
| 31 | " ..... | 213.76 |

Thus it seems that the boiling point of water varies 0.88 of a degree for every half inch of variation of the barometer, and consequently every tenth of an inch which it rises or falls, alters the boiling point of water 0.176 of a degree of Fahrenheit's scale. Experiments show that circumstances slightly modify or vary the above ratio; although not so materially as to detract from its general correctness. Thus Dr. Southern fixes the point of the barometer when the pressure is one atmosphere at 29.8 and boiling water at 212; and when the pressure is eight atmospheres, and the mercury 238.4 inches, the boiling point of water was 343.8.

We believe the honor of reviving the use of the thermometer as an instrument to measure heights, and by a long series of experiments upon which he entered, giving it a simplicity, certainty, and accu-

racy, which bids fair to give it a general superiority and preference for that purpose to the barometer, belongs to Caldas, an eminent Spanish philosopher of Upper Peru, and one of the earliest victims sacrificed by the monster Morales, when he took possession of Bogota in 1816. A memoir of his was published at Bordeaux, in 1819, in which the steps taken by him to ensure accuracy in his experiments were detailed. According to Col. Wright's statement in his "Observations made in Colombia, in 1820–30," Caldas was led to his researches in the following manner. In the year 1801, during a scientific excursion in the neighborhood of Popayan, he happened to break his thermometer; and in attempting to mend it, he was led to observe the variability of the scale corresponding to the heat of boiling water. His reflections on this subject, led him, after various experiments, to the following conclusions: "The heat of boiling water is in proportion to the atmospheric pressure; the atmospheric pressure is in proportion to the height above the level of the sea; the atmospheric pressure follows the same law as the risings of the barometer, or, properly speaking, the barometer shows nothing more than the atmospheric pressure. Boiling water, therefore, shows it in the same manner as the barometer. It can consequently, show the elevation of places in the same manner, and as exactly as this instrument."

The first object of Caldas was to obtain a correct standard or exponent of the value of each degree of the diminished temperature of boiling water. And for this it was necessary to measure heights of which the elevation had been previously correctly determined. Fortunately for Caldas the means of doing this were at hand. The French academicians sent out to measure a degree of latitude in America, had ascertained, both trigonometrically and with the barometer, the elevation of many of the peaks and plains of the Cordilleras, and as the base of their operations had taken great pains to correctly fix the elevation of the plain or city of Quito; and it is stated by them, and by Boussingault, to be 9,524 feet above the level of the sea. Caldas found water to boil at Quito at a temperature of 196°.25, and thence by an easy process found the number of feet for each degree of temperature to be 604 feet 6 inches, nearly. Neglecting the fractions 604 feet was assumed as the value of a degree of temperature. Pinchincha was next ascended, and at the foot of the crater, 246 feet below the summit, water boiled at 186°. This gave 15,730, and adding the height of the crater made the total almost precisely the elevation stated by Humboldt. We add from Col. Wright's observations, a few more instances of comparison:

Bogota, according to Humboldt,.... 8,694 ft. in ht.
Boiling water, according to Caldas, 8,712 or 197°6
Popayan, according to Humboldt,.... 5,823
Boiling water, 202°.21,..... 5,922
Parto, according to Humboldt, ..... 8,572
Boiling water, 197°.6,..... 8,712

It will be seen here that the difference in these last three instances between the elevation shown by boiling water or the thermometer, and that deduced from the barometer was respectively, 140, 99, 18, feet. But these variations are much less than those usually obtained by the best observers with different barometers. Thus the academicians generally differed from Humboldt as the following instances will show:

Quito,.....Acad.,..... 9,371
" .....Hum.,..... 9,537
Pinchincha,...Acad.,..... 15,606
" ...Hum.,..... 15,976
Chimborazo,..Acad.,..... 20,583
" ..Hum.,..... 21,414

Caldas observes, that the best barometers will usually vary when a number of them are compared at any given point, so much as to give greater discrepancies than the thermometer, as compared with them. Thus at Popayan, the Baron Humboldt's barometer stood at 23 3.4; Caldas's at 22 11.2; and Bougner's at 22 10.7.

There are some things to be taken into consideration in determining the standard of boiling water; as without such precaution in graduating the thermometer, correct results cannot be expected. M. Gay Lussac found that water boiled exactly at 212° in a vessel made of tin plate, while in a glass one it required 214°; and he concludes that the boiling point varies according to the nature of the different vessels, and the state of their surfaces, in which the ebullition takes place; and consequently depends on their conducting power and the polish. Extraneous substances in water also have an effect in raising the temperature of the boiling point. All the salts have this effect, to a greater or less degree, as will be seen from the following examples selected from a series of experiments, made by Mr. Griffiths. In the table, the first column is the number of parts of the several substances named, in 100 parts of solution:

Solution of soda,..... 31.5..... 213°
Muriate of soda,..... 30 ..... 224
Nitrate of soda,..... 60 ..... 246
Acetate of soda,..... 60 ..... 256

Thus it seems that in a solution containing 30 parts in 100 of common salt, the boiling point is 224° or 12 degrees higher than in pure water; and that in acetate of soda where 60 parts are held in solution the boiling point is 256°. All the other sulphates and muriates have more or less effect in altering the boiling point, and hence the necessity, in all experiments of the kind, as well as in the original graduation of the instruments, of using pure water. The following are the extreme boiling points of fluids so far as known at present. Muriatic ether 52°; mercury 662°.

As yet the preparation of thermometers for determining elevations, has not become common, but the ease with which they may be fitted, the little expense required, and the accuracy of their results, will doubtless soon render them an indispensable instrument in the cabinet of the philosopher, or the trunk of the traveller. The apparatus may be extremely simple, and yet efficient. The first thing is the graduation and division of the scale. As it is ascertained that every degree of Fahrenheit is equal to a difference in altitude of 604 feet, a degree of the common scale divided into ten parts would give to each one a difference of 60 feet nearly; and a further division so as to make each degree of the scale into 20 parts would show a difference in elevation of only 30 feet, as great an approximation to accuracy as could in ordinary cases be expected. For instruments for measuring heights it is evident thermometers with long tubes, as allowing a more perfect division of a degree into parts, are to be preferred. A small frame to support the thermometer, a shallow tin vessel to receive the bulb of the thermometer, and the water for boiling, with a common spirit lamp for heating it, are the main things required. Some have, we understand, been manufactured by an instrument maker of Baltimore, with which experiments have proved to be of great accuracy, and some of them have been used the past summer by the gentlemen engaged in the geological survey of this state. There can be no doubt they will prove of essential utility to all engaged in such pursuits.

[For the Northern Light.]

## LUDWIG UHLAND.

BY MATTHEW HENRY WELSTER.

UHLAND stands at the head of the German lyric poets, and is distinguished not only for the excellence of his writings, but also for the purity of his heart and character. "He was born at Tubingen, on the 26th of April, 1787: studied the law at the University of his native town, took the degree of doctor in 1810, and since 1812, has continued the practice of law at Stuttgart, where he was elected a member of the Diet of Wurtemberg in 1819. In 1829, he became Professor of German Literature at the University of Tubingen, a situation which he gave up because it hindered his second election in 1833: preferring to be one of the deputies rather than a member of the University.

Uhland has written comparatively very little. A collection of poems, which had, in 1835, gone through *seven* editions since 1815, (a very rare thing in Germany,) two tragedies and some literary treatises are all that he has published. His songs and ballads have made him the favorite of both sexes of all ages in his native country. Here the German national character is to be found in its fullest truth and entireness. Uhland never paints the feeling of others as if they were his own; in all his works he writes from his own heart; and he is so natural, that every reader appears to recognize, in his works, his own, and what is still more, his noblest sentiments. There is so much delicacy, united with the greatest dignity and the most heartfelt glow of noble passions in his poems, that it seems impossible to separate the poet from the man. A rich but calm (and *therefore* always victorious) imagination, a profound and lively conception of all that is beautiful, which feels an innocent, child-like joy, at the same time it is conscious of the mind that reigns over the universe, and bows itself in adoration before it, fascination of style, graceful images, a perpetual good nature, whether in earnest or in jest, a deep love of his Fatherland—all these precious qualities form the solid and unchanging basis, out of which the poetical conceptions of Uhland unfold themselves."

Thus enthusiastically, but no less truly, does Dr. Wolff write of Uhland. The specimens given below have been selected, not so much because they are characteristic of his style, as for the special reason that it is believed they have not hitherto appeared in an English garb.

### DYING STRAINS.

#### I.

THE SERENADE.

What sweetest sounds are those that wake
Me from my slumbers light?
Oh! mother look! who can it be
At this late hour of night?

In vain I hearken, look in vain—
O slumber still so mild—
None bring thee serenades to-night,
My poor afflicted child.

It is no music of the earth
That gives me such delight,
'Tis Angels calling me with songs,
Oh, mother dear, good night!

#### II.

THE ORGAN.

Once more again the organ touch
For me, my neighbor dear,
And try if yet your lofty strains
My dying soul can cheer?

The sick one asked, the neighbor played,
So played he ne'er before—
So clear, so glorious, that he knew
His wonted touch no more.

It is a foreign heavenly sound,
Which from his hand now flies—
He stops with horror—since the while
Her soul has sought the skies.

#### III.

THE THRUSH.

I never shall the garden see,
The summer long be ill—
Oh! could I hear the thrush's song
Amid the bushes thrill.

They snare the thrush for that dear child,
Its cage hangs near the bed;
But it will never sing, and droops
For ever more its head.

Yet once more looks the child at it
With most imploring eyes;
Warbles the thrush most loud and clear.
Then gleam its eyes—it dies.

[For the Northern Light.]

## SECOND MEETING OF THE ASSOCIATED GEOLOGISTS OF THE UNITED STATES.

BY MATTHEW HENRY WEBSTER.

THIS meeting was held in the Hall of the Academy of Natural Sciences in Philadelphia, during the week commencing on the 5th of April. The attendance was highly respectable in point of numbers, although from the restriction of membership to those who are, or have been, engaged in the Geological Surveys of the different States, its members are not numerous. Professor Silliman, of New-Haven, was President; and Prof. Lewis C. Beck, Secretary. The proceedings of the meeting were of a highly interesting and instructive character; but as the official account, which is to be published in the next number of Prof. Silliman's valuable Journal of Science, will probably give full details, a mere recapitulation of a few of the most important subjects will, perhaps, be all that may be proper for the pages of the Northern Light.

On the afternoon of the second day, Professor John Locke, of Ohio, exhibited plaster casts of portions of an enormous trilobite, and drawings of the restored animal, which he had discovered in Ohio; he considers it as new, and proposed the name of Isotelus maximus. The size of some of the specimens, if perfect, would be nearly nineteen inches long. It possesses a peculiarity, which Prof. Locke thinks has never been observed in this species of the genus Isotelus, and that is a prolongation of the buckler into a sort of horny process.

Prof. Jackson exhibited specimens of masonite, a new mineral, discovered by him in Rhode-Island, and chlorophyllite, a new mineral, discovered in New-Hampshire; also specimens of the tertiary formation of Maine and of tin, and oxide of copper from New-Hampshire. His account of these minerals and fossils was highly interesting, and the probability, of which he expressed his entire confidence, that the tin ore would be found in sufficient quantities to pay for working it, is one of great importance to the whole country.

Prof. L. C. Beck gave an account of the sulphuretted hydrogen springs in the State of New-York, which occur in great numbers and copiousness throughout its whole extent, and directed attention to the fact, that they arise from almost every rock formation; that in some places they are very copious; and that, from their number, the amount of gas given off must be enormous; their agreement in uniformity of chemical composition, of temperature above the mean of the adjacent territory—constituting them true thermal springs—is particularly to be remarked; he then mentioned the two causes to which their origin had been ascribed.

The reading of this paper occasioned a very animated discussion, in which several members took part.

Dr. Redfield, of New-York, exhibited specimens of

the fossil fish discovered in Connecticut and New-Jersey, and gave an account of them, with descriptions of such as were undescribed. This gentleman, already so distinguished by his meteorological observations, has, in connection with his son, been among the foremost in discovery and describing the fossil fish of America.

Prof. Hubbard, of Dartmouth College, exhibited a specimen of slate from the cabinet of that institution, presenting a very beautiful and perfect specimen of the catenaria figured in Murchison's Geology of Wales. This gave rise to an extended discussion on the subject of the lower shales.

Prof. Bailey, of West Point, exhibited one of the improved microscopes of Chevallier, of Paris, and explained the great value of it, especially in reference to the examination of the Fossil Infusoria. He also explained the mode which he had found best calculated for the preservation of recent specimens of this singular class of animated beings.

Mr. Nicollet gave an account of the geology of Arkansas, and exhibited a large collection of the splendid fossils from the tertiary region of that country. These were especially remarkable from their great size and the beautiful preservation of the shell, retaining almost all the brilliance of color and lustre which are seen in recent specimens. He also exhibited a very large specimen of the red pipe stone.

Prof. Locke gave a sketch of some of his magnetic observations, and called the attention of the meeting to some of the points of peculiar interest on which their field labors presented an opportunity of making observations.

Dr. Haughton asked if Prof. Locke had ever observed any effect to be produced upon the needle by large masses of water?

Dr. Locke said that he was inclined to infer from his observations, that rivers running north or south exerted no influence upon the needle; but that some observations which he had made in Kentucky and Ohio, seemed to indicate that the case was different with large rivers running east or west. But that he did not feel perfectly satisfied that such was the case.

Dr. Haughton then stated the result of some observations which he had made while engaged in the Topographical Survey of Michigan, which is connected with the geological examination of that State; to the effect that they found in almost all, if not in every instance, when they had gone over the sectional lines running from east to west, that as they approached Lake Michigan, these lines were deflected to the north, showing an increasing easterly variation. Lake Michigan, it will be recollected, runs north and south.

Mr. Hodge exhibited a large collection of rocks and fossils from North-Carolina, and gave a detailed account of the more interesting facts which he had collected during his examination of that State.

Dr. Rogers, of Philadelphia, stated some observations which had been made upon the magnesian limestones of Pennsylvania, by Mr. Baye and himself. This occasioned a conversation between Prof. Jackson and Dr. Rogers on the proportions in which lime and magnesia unite.

Prof. Vanuxem, from a committee appointed at the first meeting of the association, read a report on the bird tracks of Prof. Hitchcock, and exhibited specimens of the fossil fucoids from the State of New-York. The conclusions of the committee, Prof Hitchcock was understood to say, corresponded with the notions he now entertained.

The same gentleman also made another report on the different notions entertained by Dr. Ducachet and Mr. Conrad, on the origin of the oyster beds which are found on the coast of the Atlantic States; the committee concluded that both these gentlemen were right as to the particular cases each had examined; that there were cases in which undoubtedly they were the result of natural causes, and others in which it was equally correct that they proceeded from the labors of man.

Prof. ————, who has been charged with the survey of the State of Delaware, stated that in his forth coming report would be found the result of the examination which he had made on a great number of these beds while engaged in the survey of that State.

Prof. Silliman stated that the popular belief with regard to similar beds on the Connecticut shore of Long Island Sound, was that they had been made by the Indians during their annual visits to the coast for the purposes of fishing and collecting oysters and clams.

Mr. Redfield, inquired of the gentleman who had made the survey of Delaware, and whose name is not remembered, whether any experiments had been made upon the value of these beds in agriculture. The reply was in the affirmative, that they were very easily crushed by a common bark-mill, and had been found of great service.

The association met, by invitation, on Thursday afternoon, at the rooms of R. L. Taylor, Esq., who exhibited a plaster model of the topographical features of the western portion of the southern coal fields of Pennsylvania. This was pronounced by all familiar with the country, to be a wonderfully exact representation; its size was about eight feet by three, and the scale, I think, two inches to a mile. This extent enabled Mr. Taylor to represent the vertical elevation less distorted than is usual in sections, where so often we see insignificant hill stransformed into precipitous peaks. Mr. Taylor also read a very highly interesting paper on the uses to which this art might be applied, gave an account of the process he had employed, and a sketch of the region represented.

Prof. H. B. Rodgers then gave an account of the geology of the region under review, and made some statements as to the upturning and rolling over of strata, referring to some similar cases in the State of New-York; which drew from Prof. Mathew the remark, that if there had been time, he should have been happy to have stated his views, which were far different.

Prof. R. said he regretted that time could not be afforded for the discussion, for which he was completely prepared, but that he was happy to state that Prof. Hitchcock was a convert to his views.

Dr. Douglass Haughton gave an account of the mineral vein formation of Michigan, which was listened to with great attention and interest; but having already, perhaps, occupied more space than a due attention to the claim of other subjects may authorize, shall close this very imperfect sketch will be closed by stating that on Thursday evening, Prof. Hitchcock, the president of the first meeting, delivered a most valuable address on the points which demanded the attention of American Geologists; and that on Friday evening, Prof. Silliman, with his usual ability and eloquence, delighted a large and intelligent audience with his address as President of the second meeting. The association adjourned on Saturday to meet in Boston next spring, after having elected Dr. Charles T. Jackson, President.

The importance of this meeting to the cause of science, has induced the writer to prepare this account, of the imperfections of which he is fully aware, and his only apology for many omissions, must be his neglect to take notes of what occurred at the time, and to trust to a memory not remarkable for its retentivenesss.

## "HONOR TO WHOM HONOR."

A POPULAR and valuable periodical* has among its literary articles in a recent number the following:

"EPITAPH.

"Underneath this stone doth lie
"As much virtue as could die;
"Which, when alive, did vigor give
"To as much beauty as could live,"

As we have undertaken to give some account of the ancient English poets, and as the foregoing is a very defective version of one of the finest tributes to departed beauty and excellence to be found in our language, we deem it no more than an act of justice to its author, Ben Jonson, to produce the true version in his own words; and we avail ourselves of the opportunity of saying that we intend in a future number, to give our readers something more from the same pen.

In making this correction, we take great pleasure in bearing testimony to the ability and interest, which distinguish the articles in the Knickerbocker, and we sincerely hope that its already extended circulation on both sides of the Atlantic may be still further enlarged.

EPITAPH ON ELIZABETH L. H.

Would'st thou heare what man can say
In a little? Reader, stay.
Underneath this stone doth lye
As much beautie as could dye:
Which in life did harbour give
To more vertue than doth live.
If at all she had a fault,
Leave it buryed in this vault.
One name was Elizabeth;
The other—let it sleepe with death:
Fitter, where it dyed, to tell,
Than that it lived at all. Farewell.

## GRAND NORTHERN RAILWAY POST-OFFICE.

PASSENGERS who make the journey for the first time by the mail train of the London and Birmingham railway, will be amused by observing a travelling post-office in the string of carriages. This "Grand Northern Railway Post-Office," as the inscription on its side denotes, is a carriage consisting of two small apartments, one of which is appropriated to the guard, whose duty it is to exchange the bags, and the other is fitted up with a table for sorting letters and holes round the wall for their reception. The manner in which the duties of the clerk and guard are performed in this post-office, is strikingly significant of the new order of things introduced by the railway system. Outside the vehicle a species of net is extended by a hoop, and into this the letter bags are dropped as the train sweeps onward in its course, the bags which are to be left being at the same time tossed from the window by the guard. The fresh bag of letters being received, is speedily opened, its contents re-arranged and a new bag for the next town being made up, it is projected as before at the place of its destination. By this means, a letter may be written, sent through the post-office and delivered at the distance of twenty miles in the space of a single hour.—[*Chambers' Journal.*

* The Kinckerbocker for May, 1841, page 426.

# General Intelligence.

## FRANCE.

BY JOHN A. DIX.

THERE is no country in Europe, which exhibits in its physical and social condition more elements of prosperity and strength than France: nor is there a people on the continent, whose political movements command a larger share of attention on the part of others. Her local position among the nations of Europe is a principal source of interest. She lies directly opposite the island of Great Britain—the seat of that extraordinary power, which though constituting geographically an almost invisible point on the surface of the globe, has succeeded by money and military prowess in surrounding it with an unbroken chain of dependencies. A narrow channel separates them. Ninety minutes are sufficient with the aid of steam power to bring their forces into contact. For all purposes of external intercourse her position is in the highest degree favorable. Commencing at Dunkirk on the north, in the meridian of Paris, and following the line of coast south-westerly to Calais, Boulogne, Dieppe, Havre and Cherbourg; thence south to St. Malo; thence west to Brest; thence south-east to L'Orient; thence south to La Rochelle, Rochefort, Bordeaux and Bayonne, she has a circuit embracing seven degrees of longitude and as many of latitude, with an exterior line extended at least a thousand miles by the indentation of the water into the land, and opening a country rich and diversified in its soil and products to the bosom of the ocean. Commencing at Cape Serberes in the Mediterranean and passing by Perpignan, Narbonne and Montpellier to Marseilles; thence by Toulon to the frontier of Nice, she spans a coast of some three hundred miles in extent, looking out upon that broad expanse of sea, which separates Europe from Africa, and holding it, as it were, under her eye. If she possesses, as we suppose, in an eminent degree, all the elements of national power, she possesses also, in her territorial position, the ability to make the best use of them.

But it is not on account of her position alone that she is the object of so general an interest. The internal agitations, by which she has been convulsed, and the distinguished part she has played in the political drama of Europe in years past have fastened upon her the eyes of the whole civilized world. What a succession of events do her annals for the last half century present! It is just that length of time (the night of the 20th, 21st June, 1791,) that her king, Louis the 16th, was arrested at Varennes in attempting to escape from the dangers, which threatened him at Paris. In less than two years afterwards (the 21st of January, 1793) he was beheaded. Since that period we have seen the foundations of her social order broken up, and its elements entering into new combinations; her government passing successively through the forms of a republic, a military despotism and a constitutional monarchy; her armies in possession of the capital of almost every country on the continent of Europe, overspreading the burning plains of Africa and the ice-bound marshes and forests of Russia, and setting not only man but the elements themselves at defiance; a great conqueror and stateman springing up to overrule her destinies, remodelling her laws and institutions, eradicating ancient abuses, cherishing internal industry, science and the arts; carrying her by the resources of his genius to the highest pitch of military renown, adorning her capital with the spoils of other nations, but at last drawing down upon himself the hostility of the great nations of Europe, falling a victim to their combinations and their arms, and after seeing his capital in their possession, transported himself and chained, as it were, to a rock in the midst of the ocean, under a fiery sun, and left to perish by a painful and protracted disease. We have seen the ancient line of kings, which was broken by the execution of Louis the 16th, restored in the person of the 18th of the same name; the immediate successor of the latter fleeing from his capital and taking refuge in a foreign country, and a collateral branch of the same family raised to the regal dignity in the person of the reigning sovereign, holding the reins of government under the guaranty of a charter, which flatters and mocks the people of France with the promise of constitutional freedom. Throughout all these changes and vicissitudes France, as a country, has been constantly advancing, though with very unequal steps, in wealth, prosperity and physical power.

To the people of the United States whatever concerns her is invested with more than ordinary interest. When we were struggling to break the fetters, which bound us to the British Empire, she espoused our

cause and aided us with her money and her arms. Her fleets hovered around our defenceless coasts, and protected them from the incursions of the invader; her soldiers fought, side by side, with ours the battles of freedom: the swords of Washington and Lafayette were unsheathed on the same fields of strife; and the names of Rochambeau, De Grasse, D'Estaing, De Ternay, and many another gallant son of France are identified with the history of our birth as a sovereign and independent people. Controversies arising out of questions of international interest have on two or three occasions produced a momentary hostility and alienation between us; but to the honor of both parties, let it be said, that all such feelings have speedily given place to the better sentiment of friendship and a kindly remembrance of our ancient association.

In the year 1835 M. Duchatel, the Minister of Commerce of France, presented to the King an account of the statistical condition of the kingdom under some of its most important aspects.* From this account, and others of a more recent date, we shall gather the facts, which we now proceed to present to our readers.

### TERRITORY.

The territorial surface of France contains 52,760,-298 hectares,† equal to 131,379,138 square acres.

| *Superficial contents of taxable property.* | *Hectare.* | *Are.* | *Cent.* |
|---|---|---|---|
| Arable land, | 25,559,151 | 86 | 24 |
| Meadows, | 4,834,621 | 12 | 42 |
| Vineyards, | 2,134,822 | 11 | 08 |
| Woods, | 7,422,314 | 69 | 25 |
| Orchards, nurseries and gardens, | 643,694 | 81 | 31 |
| Osier, alder and willow plots, | 64,489 | 71 | 12 |
| Ponds, watering-places, pools and canals for irrigation, | 209,431 | 29 | 17 |
| Waste lands, pastures and heaths, | 7,799,672 | 29 | 00 |
| Canals for navigation, | 1,631 | 73 | 00 |
| Devoted to culture of various kinds, | 951,934 | 25 | 65 |
| Surface occupied by buildings, | 241,842 | 00 | 29 |
| Total taxable, | 49,863,609 | 88 | 51 |
| *Superficial contents of property not taxable.* | | | |
| Highways, roads, public squ's, st's, &c. | 1,215,115 | 41 | 47 |
| Rivers, lakes and streams, | 454,265 | 81 | 84 |
| Forests,‡ unproductive grounds, | 1,209,432 | 90 | 51 |
| Cemeteries, churches, rectories and public buildings, | 171,774 | 50 | 39 |
| Total not taxable, | 2,896,688 | 64 | 31 |
| Total taxable and not taxable, | 52,760,298 | 52 | 72 |

| *Number of taxable possessions occupied by buildings.* | |
|---|---|
| Houses and other habitations, | 6,642,416 |
| Wind-mills and water-mills, | 82,575 |
| Forges and furnaces, | 4,418 |
| Manufactories and workships, | 38,030 |
| | 6,767,433 |
| Number of owners, | 10,896,682 |
| " distinct lots or parcels, | 123,360,338 |

### POPULATION.

| | |
|---|---|
| MALES—Children and unmarried, | 8,866,422 |
| Married, | 6,047,841 |
| Widowers, | 722,611 |
| Military, | 303,231 |
| Total males, | 15,940,105 |
| FEMALES—Children and unmarried, | 9,069,923 |
| Married, | 6,056,836 |
| Widows, | 1,502,369 |
| Total females, | 16,629,118 |
| Total males, | 15,940,105 |
| Total population of both sexes, | 32,569,223 |

This result was obtained by the census of 1831. The British annual for 1839 states the aggregate population of France at 35,540,908, but without giving the details of the enumeration.

### COMMERCE IN 1833.

*Special.*

| | | |
|---|---|---|
| Merchandise imported into France for consumption. Value in francs, | 491,137,471§ | |
| | or, | $96,088,275 79 |
| Natural products and manufactured articles exported. Value in francs, | 559,425,054 | |
| | or, | $104,892,197 62 |

*General.**

| | | |
|---|---|---|
| Value of merchandise imported. In French vessels, | francs | 278,153,354 |
| Foreign vessels, | " | 188,963,825 |
| By land, | " | 226,158,573 |
| Total value of imports, | " | 693,275,752 |
| | or, | $129,989,204 50 |

*General.*

| | | |
|---|---|---|
| Value of merchandise, foreign and French, exported. In French vessels, | francs | 239,948,388 |
| Foreign vessels, | " | 310,460,201 |
| By land, | " | 215,907,783 |
| Total value of exports, | " | 766,316,312 |
| | or, | $143,684,308 46 |
| Total value of imports and exports, | | $273,673,812 96† |

*Commerce with each of the powers of Europe.*

| *Countries.* | | *Imports.* | *Exports.* |
|---|---|---|---|
| England, | francs, | 39,741,669 | 116,195,858 |
| Holland, | " | 5,480,678 | 16,070,201 |
| Belgium, | " | 68,844,933 | 52,348,158 |
| Sweden and Norway, | " | 13,404,414 | 3,206,735 |
| Denmark, | " | 2,842,308 | 2,468,371 |
| Russia, | " | 23,103,800 | 10,585,791 |
| Hanse towns, | " | 8,561,755 | 18,045,071 |
| Austria, | " | 48,243,375 | 6,657,401 |
| Prussia, | " | 20,491,292 | 7,401,060 |
| Germany, | " | 28,367,138 | 41,945,770 |
| Switzerland, | " | 31,168,003 | 58,191,499 |
| Sardinian States, | " | 68,637,600 | 49,687,122 |
| Tuscany & Roman Sta's, | " | 9,538,663 | 11,691,229 |
| Naples and Sicily, | " | 15,127,867 | 10,927,145 |
| Spain, | " | 43,844,595 | 62,491,690 |
| Portugal, | " | 1,811,978 | 2,011,724 |
| Greece, | " | 823,624 | 1,965,539 |
| Turkey, | " | 17,164,911 | 14,412,779 |
| Countries in Europe, | " | 447,198,614 | 486,273,043 |
| Countries not in Europe, | " | 246,077,138 | 280,043,269 |
| Total francs, | | 693,275,752 | 766,316,312 |

*Commerce with her colonies and countries not in Europe.*

| *Countries.* | | *Imports.* | *Exports.* |
|---|---|---|---|
| Egypt, | fr's, | 2,877,629 | fr. 3,501,144 |
| Barbary States, | " | 10,463,138 | 24,855,420 |
| Dutch, English, Danish & Spanish West Indies, | " | 7,692,704 | 12,073,380 |
| Hayti, | " | 3,512,108 | 6,338,024 |
| United States, | " | 99,079,212 | 134,965,261 |
| Brazil, | " | 9,038,622 | 18,192,383 |
| Mexico, | " | 5,340,807 | 15,026,670 |
| Buenos Ayres, | " | 4,676,336 | 5,033,716 |
| Columbia, | " | 1,142,257 | 832,721 |
| Chili, | " | 2,082,788 | 2,532,114 |
| Peru, | " | 218,988 | 4,291,130 |
| Isle of France, | " | 64,696 | 1,541,130 |
| China and Cochin China, | " | 2,385,263 | 1,883,294 |
| East Indies, (foreign,) | " | 30,651,367 | 6,207,719 |
| East Indies, (French,) | " | 266,235 | 138,499 |
| Martinique, | " | 14,761,803 | 12,438,288 |
| Gaudaloupe, | " | 21,161,430 | 12,296,101 |
| French Guiana, | " | 2,157,740 | 2,272,611 |
| Isle of Bourbon, | " | 16,178,236 | 7,020,561 |
| Bengal, | " | 2,139,408 | 3,798,320 |
| St. Pierre, Miquelon and French fisheries, | " | 7,696,598 | 4,803,983 |
| Strays and wrecks, | " | 489,783 | |
| Countries not in Europe, | " | 246,077,138 | 280,043,269 |
| Countries in Europe, | " | 447,198,614 | 486,273,043 |
| Total, | " | 693,275,752 | 766,316,312 |

*Navigation for* 1833 *with her colonies and foreign powers.*

ARRIVALS.

| French. | | Foreign. | | French & Foreign. | |
|---|---|---|---|---|---|
| Vessels. | Tonnage. | Vessels. | Tonnage. | Vessels. | Tonnage. |
| 3,661 | 388,187 | 5,115 | 622,735 | 8,676 | 980,890 |

DEPARTURES.

| French. | | Foreign. | | French & Foreign. | |
|---|---|---|---|---|---|
| Vessels. | Tonnage. | Vessels. | Tonnage. | Vessels. | Tonnage. |
| 3,675 | 318,840 | 4,580 | 464,028 | 8,255 | 782,868 |

*Navigation, including fisheries and coasting.*

ARRIVALS.

| | Vessels. | Tonnage. | Crews. |
|---|---|---|---|
| From her colonies & for'n cou's, | 3,661 | 388,187 | 28,080 |
| Fisheries, | 4,442 | 79,160 | 28,333 |
| Coasting, | 78,123 | 2,523,632 | 308,478 |
| Total arrivals, | 86,126 | 2,960,949 | 364,890 |

DEPARTURES.

| | Vessels. | Tonnage. | Crews. |
|---|---|---|---|
| To her colonies & foreign pow's, | 3,675 | 318,840 | 27,639 |
| Fisheries, | 4,531 | 97,129 | 32,830 |
| Coasting, | 75,957 | 2,431,342 | 297,374 |
| Total departures, | 84,163 | 2,847,311 | 357,843 |

*Effective commercial marine in* 1833.

| | |
|---|---|
| Number of vessels of 800 tons and upwards, | 1 |
| From 700 to 800 tons, | 2 |
| " 600 to 700 " | 1 |
| " 500 to 600 " | 11 |
| " 400 to 500 " | 44 |
| " 300 to 400 " | 187 |
| " 200 to 300 " | 539 |
| " 100 to 200 " | 1,200 |
| " 60 to 100 " | 1,485 |
| " 30 to 60 " | 1,038 |
| Of 30 tons and less, | 10,517 |
| Total number of vessels, | 15,025 |
| Tonnage of the above, | 647,107 |

### COLONIES.

| *Names.* | Free population. Males. | Fem's. | Slave populati'n. Males. | Fem's. | Total. |
|---|---|---|---|---|---|
| Martinique, | 11,399 | 12 018 | 41,825 | 54,474 | 119,716 |
| Gaudaloupe, | 10,555 | 11,769 | 47,259 | 50,080 | 119,663 |
| Guiana, | 1,873 | 1,887 | 10,213 | 8,889 | 22,862 |
| Isle of Bourbon, | 14,059 | 13,586 | 46,802 | 23,483 | 97,930 |
| Senegal, | 1,331 | 1,666 | 5,397 | 6,012 | 14,406 |
| | 39,217 | 40,926 | 151,495 | 142,938 | 374,577 |

France has also some colonial establishments in the East Indies, with an aggregate population of 152,901 souls.

### REVENUE, 1832.

| | | |
|---|---|---|
| Ordinary receipts, | fr's, | 982,316,116 |
| Extraordinary do. | " | 1,064,031,296 |
| Total revenue, | " | 1,046,347,412* |
| | or, | $196,190,139 75 |

### EXPENDITURES, 1832.

| | | |
|---|---|---|
| Administration of justice and religion, | fr's, | 18,915,760 |
| Department of foreign affairs, | " | 33,816,191 |
| " public instruction, | " | 7,165,430 |
| " commerce, | " | 11,781,705 |
| " the interior & pub. works, | " | 125,384,929 |
| " war, | " | 339,144,378 |
| " marine, | " | 64,157,233 |
| " finance, | " | 570,064,703 |
| Total expenditure, | " | 1,174,620,777 |
| | or, | $220,241,490 93 |

Thus it appears that the expenditure of the kingdom in 1832 exceeded its revenue by 128,273,345 francs. The report of the Minister of Commerce shows a loan of 150,000,000 francs in 1832 from the houses of Rothschild, Darillier and Hottinguer.

### PUBLIC DEBT, 1832.†

Francs, 5,417,495,017—or, $988,692,840·60

### ARMY, 1832.

*Effective force.*

| | |
|---|---|
| General staff, | 4,045 |
| Gensdarmes, | 16,939 |
| Infantry, | 262,263 |
| Cavalry, | 50,000 |
| Artillery, | 34,898 |
| Engineers, | 7,791 |
| Attendants, | 4,434 |
| Veterans of the army, | 9,913 |
| Total, | 389,273 |
| Horses, | 83,712 |
| Expenses, francs, | 338,698,924 |
| | or, $63,487,298 25 |

### NAVY, 1834.‡

| | *Afloat.* | *On the stocks Dec.* 1833. |
|---|---|---|
| Ships of the line, | 33 | 24 |
| Frigates, | 38 | 26 |
| Corvettes, | 29 | 6 |
| Brigs and schooners of 10 to 12 guns, | 53 | |
| Bombs, | 8 | |
| Vessels of 6 to 12 guns, | 27 | |
| Inferior vessels of different sorts, | 36 | |
| Steam vessels, | 20 | 3 |
| Ships of burden, | 20 | |
| Lighters, | 30 | 8 |
| Transports, | 4 | |
| | 298 | 67 |
| | 67 | |
| | 365 | |

### STATISTICS OF MINES.§

*Iron.*

| | |
|---|---|
| Number of foundries and forges, | 866 |
| " laborers, | 14,679 |
| Machines propelled by water, | 3,189 |
| " by steam, | 69 |
| Force of machinery—horse power, | 22,660 |

*Coal.*

| | Mines. Worked. | Not Worked. | Workmen. Out of mines. | In the mines. | Total. | Steam engines. No. | Horse power. | Horses. In mines. | Out of mines. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| Bituminous, | 157 | 59 | 12826 | 4624 | 17440 | 263 | 5543 | 289 | 1240 | 1529 |
| Lignite, | 42 | 35 | 944 | 114 | 1058 | | | | | |
| Anthracite, | 24 | 13 | 707 | 279 | 986 | 4 | 60 | | 133 | 133 |
| Total, | 223 | 107 | 14477 | 5017 | 19484 | 267 | 5603 | 289 | 1373 | 1662 |

*Marine Salt.*

| | |
|---|---|
| Pits, mines and springs worked, | 110 |
| " " " not worked, | 17 |
| Total, | 127 |
| Number of workmen, | 16,634 |

*Quarries of marble, building stone, lime, plaster, &c.*

| | |
|---|---|
| Number of all kinds worked, | 18,815 |
| " of workmen, | 70,396 |

*Value created in each branch of mineral industry in* 1837.

| | | |
|---|---|---|
| Coal and peat, | fr's, | 30,833,922 |

---

* Documents Statistiques sur La France, publiés par le Ministre du Commerce. Paris: De l'imprimerie royale. 1835.

† According to the Engineer's Pocket Almanac the hectare contains 11960·4604 English yards, equal to 2·47116 square acres. The acre is, therefore, 0·404668 of a hectare. The British annual states the acre (which contains 4840 square yards) at 0·404671 of the hectare, and the hectare as containing 2,473614 acres. These two statements are inconsistent with each other. If the acre is 0·404671 of the hectare, the hectare must contain 2·471143 acres, differing 0·02471 from the British annual's own statement of the contents of the hectare. This difference, though small, is sufficient to produce considerable errors in the estimation of large quantities. Since making the foregoing calculations, we perceive that in the French "Annuaire pour l' an 1837, presenté au Roi par le bureau des Longitudes," the acre is stated at 0·404671, and the hectare at 2,471143; showing the inaccuracy of the statement in the British annual. For ordinary calculations, in which great accuracy is not required, hectares may be reduced to acres by multiplying the former by 2½. The are is the one-hundredth part of the hectare, and the centiare the one-hundredth of the are.

‡ "*Royal Forests in France.*—In 1837 the number was 1,473, containing 1,019,139 hectares, equal to 2,617,273 acres. Their total approximate value was estimated at 29,079,736*l.* [$139,-682,722·80,] averaging 11*l.* 11s. [$55·44] per acre."—[*Journal of the Statistical Society of London for January*, 1839, *page* 555.

"*State Property in France.*—The total value of property of all kinds belonging to the state, in France, including buildings appropriated to the public service, or religious worship, and forests, was, in 1837, 51,091,824*l.* [$245,240,755·29] of which 347,420*l.* was applicable to the public service."—*Ib.*]

§ The five franc piece is worth in England 3s. 11½*d.*—*British Annual for* 1837. Taking the value of the shilling sterling at 24 cents, the five franc piece is worth here 95 cents, and the franc 19 cents. The five franc piece passes current with us at 93½ cents, making the value of the franc 18¾ cents.

* The journal of the Statistical Society of London for January, 1839, page 413, states the total value of imports into and exports from France in 1837 at 1,866 millions of francs, equal to $293,626,666·66, exceeding by $19,953,153·69 the value of the imports and exports of 1833.

† "General commerce is the term applied in the French official tables to importations as regards the trade inwards, and to exportations of foreign and French merchandise, as regards the trade outwards. Special commerce is limited to merchandise entered for home consumption, inwards, and to exportations of French merchandise, outwards."—[*Journal of the Statistical Society of London for Jan.* 1839, *p.* 513.

* In our 1st No. page 16, it will be seen that the revenue of France in 1840 was 1,184,623,365 francs, exceeding by $25,902,-928·68 the revenue of 1832.

† Population, expenses and debts of France by M. Marc Jobot, page 58, vol. 3rd of the Journal of the French Statistical Society.—[*Journal des Travaux de la Soci.té Française de Statistique Universelle.*

‡ Page 143, vol. 4, Journal of the French Statistical Society.

§ Resumé des Travaux Statistiques de l'administration des Mines en 1836.

| | | |
|---|---|---|
| Principal elaborations of iron and steel, | " | 124,388,616 |
| Metals other than iron, bituminous minerals and salts, | fr's, | 13,826,120 |
| Products of quarries, | " | 40,350,419 |
| Principal elaborations of mineral subst's, | " | 168,588,714 |
| | " | 377,684,791 |
| | equal to | $70,815,898 31 |

INLAND NAVIGATION.

"The number of canals completed in 1837 was 74, and their length 2,300 miles; the number of rivers 143, and the extent of their navigation at the same period 5,130 miles; making altogether 7,430 miles of inland navigation."*

Such are some of the principal elements of strength, which France possesses. Yet they afford but an imperfect conception of her power. In the actual condition of her people, the principles of social amelioration in full activity, and the general distribution of property brought about by alterations in the frame of her government, and by laws adapted to these organic changes, she is in advance of all the other great powers of Europe. In the rapidity of her progress she has equally outstripped them all. In 1789, she exhibited in her social physiognomy most of the features of the political organization which was built up on the ruins of the feudal system —entails, the law of primogeniture, seignorial rights, and corporations. It is true that the noblesse were at that time gradually falling into decay and losing their exclusiveness by alienations of their domains, on the one hand, through pecuniary embarrassments, and by alliances with the tiers état† on the other, to repair their dilapidated fortunes. Since that time the sale of the church estates, and the lands of the emigrated nobles, who adhered to the Bourbons, and the introduction of the law of equal succession, have produced a radical change in the distribution of property, and have contributed to elevate the great body of the people by a silent, but irresistible process, which is still going on with unabated force.‡ The subdivision of the farming land of the kingdom is even now extremely minute. Farms are said to average but fourteen acres. Of the thirty-two millions of inhabitants exhibited by the enumeration of 1831 twenty millions, nearly two-thirds belonged to the class of landed proprietors.§

It is not within the scope of this article to speak of the intellectual condition of France—of her great men, and of the works of genius, which they are constantly throwing off for the instruction and improvement of mankind. Of her agricultural statistics we were desirous of speaking fully—but we have been unable to procure such information as to enable us to enter into a detailed view of the extent of her agriculture or its progress in past years. In a future number we trust it will be in our power to do so. Nor have we space to enter into any examination of the political constitution of her government. Suffice it to say, that with a population of 35,000,000, the whole constituency of the Chamber of Deputies —the only branch of the government into which the representative principle enters—does not exceed 200,000‖ persons, or about the 170th part of her people.

In respect to an element of weakness, which all political societies contain within themselves, France bears a highly favorable comparison with her neighbors. In Great Britain paupers compose one-sixth of the population;—in Holland¶ and Belgium one-seventh; in Switzerland one-tenth; and in France only one-twentieth.

All accounts concur in ascribing to France a high degree of prosperity, and a rapid amelioration of the social condition of her people. When the rule of primogeniture was abolished, a distinguished political economist in England predicted that her industry and her wealth would decline. But experience has completely falsified the prediction. It has shown that the prosperity of a country depends not so much upon the augmentation of the aggregate amount of wealth as in its distribution among the great body of the people. When wealth exists in masses as in England, individuals and the nation may be rich, while the people may for the most part be poor and needy. In France this state of things is directly reversed. The rich and powerful are few in number; the poor, compared with most other European states, are not numerous; the principle of political equality has taken deep root in the hearts of her people: her party divisions are founded upon differences of opinion less radical, perhaps, than those which prevail under any other constitutional form of government in the old world. In a word, though France has a government arrayed in some respects against the prevailing spirit of liberty and even against the promise of reform, which accompanied its accession to power, she has a prosperous, united and busy people; her industry is rapidly extending itself; her wealth is great and constantly becoming greater; her power, intellectual, social and physical, is rapidly increasing; and if the prevailing peace in Europe should, from any unhappy cause, be disturbed, and she should again become an actor in scenes of strife, we shall be much mistaken if her blows are not dealt with the same vigor and success, which have marked the most brilliant periods of her military history. But it is earnestly to be hoped that her future march may be, not through fields of carnage, but in the quiet and unoffending walks of peace. She has not yet repaired the ravages, which her recent conflicts have made in the ranks of her people. By the census of 1831, it appears that the number of widowers in France was 722,611, and the number of widows 1,502,359 —or 779,748 more wives without husbands than husbands without wives! A portion of the disparity (how large we cannot say) may be accounted for by the practice, which prevails among the males of the upper, and to a certain extent of the middle classes, of living single to a late period of life, and then marrying young wives. But a considerable portion is doubtless owing to the wars, in which she had been engaged. Claiming for the latter cause no more than is due to it, what a tale of bloodshed and domestic calamity does this item in the statistics of human life in France tell for her instruction—what a lesson of admonition to those who hold in their hands the issues of war or peace! For the cause of humanity, for the sake of those, with whom she is liable to come in conflict, and for her own sake, it is to be hoped, that this great power—to use the language of a British periodical,* "the most important of the continental nations"—may not be provoked by real or imaginary injuries into a hostile exhibition and use of her strength.†

* Journal of the Statistical Society of London, for Jan. 1839, page 555.

† The term tiers état, though often considered as designating the middling classes, is of far more general import. It includes the whole people except the noblesse and the clergy.

‡ Some differences of opinion still exist in England as to the effect of the great subdivision of land in France upon her agricultural industry. For instance, the Spectator in a recent number says: "The law of inheritance, although by the adoption of the right of primogeniture it leveled the aristocracy by rendering imperative an extreme subdivision of property, produced an evil of another kind. By promoting the increase of poor tillers of the soil, it repressed the ingenuity, enterprise and accumulation of property in private hands, which are necessary to the development of national resources, and the growth of an independent industrial class of citizens."

From this doctrine it is hardly necessary to say we utterly dissent. We agree with the following remark of an interesting writer in the Monthly Chronicle giving an account of his travels through France:

"I think I am justified in assuming that the condition of France at the present moment is one of great and enviable prosperity. Traveling as I have done by diligences and steamboats, I had a good many opportunities of hearing the opinions of persons of different ranks and professions; and to my astonishment I found them all unanimously agreed in attributing the prosperity of the country and the improved condition of the people to the same cause, namely, the subdivision of landed property consequent on the abolition of primogeniture."

Believing, as we do in the United States, that there is no greater social or political evil than an unequal distribution of property perpetuated, as in England, by law, we can readily concur with this writer, though without being astonished, like him, at the prevailing opinion among the French people that the abolition of the rule of primogeniture has been one of the efficient causes of their prosperity.

§ London Quarterly Review, December, 1834, Article II. Mr. Caillean, President of the committee of agriculture of the French Academy of Industry in an address before the society in May, 1833, said, "Two-thirds of the population of France are engaged in agriculture."

‖ London Quarterly Review, August, 1834, Art. XI.

¶ Edinburgh Review, March, 1838 Art VIII.

* Foreign Quarterly Review.

† In this account of France, we have made no mention of Algiers, a recent conquest in Africa; but it is our intention to give the statistics of that Colony in a future number.

## SUMMARY OF EVENTS.

It was a part of the original design of the Northern Light to furnish its readers with a regular summary of the most important events, which should occur on both sides of the Atlantic; but it was not expected that we should be able to do more than to glance at them, as a large portion of our paper is appropriated to other subjects. We have, however, deviated from the original plan by entering into a detailed account of some of the most interesting occurrences in Europe, Africa and Asia, as the Syrio-Egyptian question in our 1st No. and the controversy between Great Britain and China in our 2nd. Our readers will, we are satisfied, be better pleased with this change than they would have been, if we had adhered to our original intention of giving a mere register of events, which, from the necessity of the case, could have been but little more than a chronological table. In future numbers we may think it advisable to continue this course, noticing, somewhat in detail, the more important occurrences of the day, and passing by others of inferior moment with comment. But to redeem the pledge originally given we proceed to present, in their chronological order, some of the events of the last five months, which occur to us as worthy of notice. It is proper to remark, however, that the domestic calendar, with the exception of a few inauspicious days, is almost wholly barren of incident, either of evil or of good.

DOMESTIC.

*Jan.* 5.—The legislature of this State met at Albany.

*Jan.* 7.—The packet ship Garrick with 67 souls on board, was wrecked on the Jersey shore, about twenty miles south of the city of New-York. No lives were lost; most of the cargo was subsequently saved in a damaged state; and on the 29th, after twenty-two days of incessant labor, the vessel was put afloat. She has since been repaired, and is now ready for sea. This is one of the most singular triumphs of perseverance and skill on record.

A great flood, occasioned by heavy rains, occurred on the Hudson and its tributaries. At Albany the water was higher, in portions of the city, than it had been for half a century. The dam on the Croton river was carried away, and the aqueduct seriously injured.

*Jan.* 14.—John Leland, of Cheshire, a distinguished Baptist divine, died at North Adams, Mass. at the age of 86 years. He preached only six days before his death. In 1801 he presented to President Jefferson the celebrated Mammoth cheese in behalf of the democrats of Cheshire.

*Feb.* 4.—The Bank of the United States suspended specie payments—the third time in four years. This final suspension, as it is believed to be, was followed by an exhibition of the condition of its affairs, which has excited universal astonishment on both sides of the Atlantic.

*Feb.* 6.—Alexander McLeod, whose imprisonment has excited so much discussion and angry feeling, and in some degree put at hazard the friendly relations subsisting between Great Britain and the United States, was indicted for murder by the Grand Jury of Niagara county, at Lockport, on account of his supposed participation in the destruction of the Caroline. There were twenty jurors present, nineteen of whom were for the indictment.

*Feb.* 10.—The votes given at the elections in November last for President and Vice-President of the United States were counted in the House of Representatives at Washington, in presence of the members of the two Houses of Congress, and stood as follows:

*For President.*

| | |
|---|---|
| William Henry Harrison, of Ohio, | 234 |
| Martin Van Buren, of New-York, | 60 |
| | 294 |

*For Vice-President.*

| | |
|---|---|
| John Tyler, of Virginia. | 234 |
| Richard M, Johnson, of Kentucky, | 48 |
| Littleton W. Tazewell, of Virginia, | 11 |
| James K. Polk, of Tennessee, | 1 |
| | 294 |

*Feb.* 11.—John D. Dickinson died at Troy, aged 74 years. Mr. Dickinson was a highly respectable citizen, and had represented Rensselaer county in Congress.

*Feb.* 21.—Richard H. Menefee, formerly a member of Congress from Kentucky, died at Frankfort.

*Feb.* 24.—Philip P. Barbour, of Virginia, a Judge of the Supreme Court, formerly a member of Congress, and one of the most prominent men of his native State, died at Washington city. He retired in perfect health the night before, and was found dead in his bed in the morning.

*March* 4.—William Henry Harrison was inaugurated as President of the United States.

*March* 11.—The steam-packet President sailed from the city of New-York for Liverpool. Nearly three months have elapsed, and no tidings have been received from her. The probability is, that she foundered in a violent gale which occurred when she was two days out of port, or that she was destroyed by icebergs. At all events but little hope remains that she will ever be heard of. The President was, we believe, the largest steamer ever built. She cost £80,000, or about $384,000, and was insured at £60,000, or about $288,000. Her burthen was 2,360 tons, and her engines of 540 horse-power. Her crew numbered 81 persons, and passengers 28; in all, 109 souls. The following is a list of the passengers:

Edward Barry, J. C. Roberts, New-York; J. Leo Wulf; Master Mohring; J. C. Pfeffel, A. R. Warburgh, N. York; D. Fitzroy Lennox, M. Courtney, British Army; T. Power and servant; C. H. D. Miesegares, Philadelphia; Samuel Nails, N. Y.; Charles Cadett, Buenos Ayres; T. Palmer, Baltimore, Md.; Dr. M. Lorner, T. Blancher, Cuba; John Fraser; H. Van Lohe, jr., Amsterdam; A. S. Byrne, London; Mr. Thorndill, N. Y.; W. W. Martin; England; E. B. Howell and friend, A. Livingston, N. Y.; Rev. G. G. Cookman, Washington, D. C.; P. Deucher, Scotland; B. Morris and child.

*April* 1.—One of the most striking and melancholy illustrations of the disregard of moral principle introduced by the speculating mania of 1835 and 1836, is the case of Charles F. Mitchell, late a member of Congress from the Counties of Niagara and Orleans. He was extensively engaged in land speculations in 1836, and, like many others, became, by the revulsion of 1837, deeply involved in pecuniary embarrassment. To relieve himself from his difficulties, he forged, soon after the expiration of his term of service in Congress, a number of drafts, some of which to the amount of five or six thousand dollars, he negotiated in New-York and Philadelphia. The forgeries having been discovered, he fled to Canada, but was pursued and apprehended at Montreal. He has been surrendered by the Governor of Canada on requisition of the Governor of this State, and is awaiting his trial in the city of New-York.

*April* .—About the same time, a most extraordinary series of forgeries upon several of the Philadelphia, Baltimore, and western Banks occurred. The amount of $51,000 was actually obtained upon forged checks and certificates; and other forgeries to more than an equal amount were committed, but the money was not procured on the forged paper. The perpetrator of these extensive frauds, whose name is Dawson, has been arrested at St. Louis.

*April* 4.—The President of the United States, William Henry Harrison, died at Washington, just one month after his induction into office. In the 2d number of our paper, this melancholy event has been more particularly noticed.

*April* 11.—General Harrison's house at North Bend, took fire, but the fire was fortunately extinguished before any extensive injury was sustained.

*April* 19.—Philip K. Lawrence, Judge of the U. S. District Court for the Eastern District of Louisiana, died at New-Orleans.

*May* 20.—McLeod was discharged by order of the Supreme Court, from the custody of the sheriff of Niagara co. and committed to the custody of the sheriff of the County of New-York.

*May* 29.—The National Theatre in the city of New-York, was consumed by fire,—doubtless the work of incendiaries, the previous day, Friday, fire having been discovered in six different places, but fortunately extinguished. So rapid was

the progress of the flames, that the rear wall fell on a neighboring house, and killed one of its occupants. Thus have the incendiaries been guilty of murder as well as arson.

*May* 26.—The Legislature of New-York adjourned, after a session of four months and twenty-one days. Among the most important acts of legislation, is an act making various alterations in the common school system, particularly in relation to the inspection of the schools, which is henceforth to be entrusted to County superintendents, to be appointed by the Board of Supervisors, instead of town inspectors. Each school district is also to be furnished at the public expense, with a copy of a periodical not partaking of a sectarian or party character, in which the common school regulations and the superintendent's decisions are to be published. It is understood that this periodical will be the District School Journal recently published at Geneva, and hereafter to be published in Albany.

We have given at full length under our agricultural head the act to promote agriculture and household manufactures.

The amount of money authorized to be borrowed during the present year for internal improvements is as follows:

| | |
|---|---|
| Enlargement of the Erie Canal, | $2,150,000 |
| Genesee Valley Canal,..... | 550,000 |
| Black River Canal,..... | 300,000 |
| | $3,000,000 |

The stock to be issued is not to bear an interest of more than six per cent.

*May* 30.—Bates Cook, late Comptroller of the State, died at Lewiston.

*May* 31.—The 27th Congress met at Washington in pursuance of the late President's Proclamation. The Senate was called to order by Samuel L. Southard of New Jersey, who is Vice President, pro tempore. The House was organized by the election of John White of Kentucky, as Speaker, and Matthew St. Clair Clarke, of Washington city, as Clerk. Mr. Clarke was the immediate predecessor in the same office, of Mr. Franklin, who preceded the late incumbent, Mr. Garland. The President's Message was received on the following day, the 1st of June. We have not space to give even a synopsis of its contents.

FOREIGN.

In previous numbers we have so fully noticed the most important events in the old world, that it only remains for us to refer to a few incidents for the purpose of putting them on record.

*Jan.*—The weather in England was uncommonly severe—so much so that many persons died in London from cold and famine. Verdicts were often rendered—"died from the want of the common necessaries of life."

*Jan.* 26.—The British Parliament was opened by the Queen in person. A London paper states that a more than usually large concourse of her royal subjects crowded to greet her, as it was her "first public appearance since the interesting event, which gave to the nation an heiress in the direct line to the throne."

*Jan.* 30.—Six hundred buildings were consumed by fire at Mayaguez, Porto Rico. Loss from two to four millions of dollars.

*Jan.* 31.—Daniel Brent, American Consul, died in Paris, aged 68 years.

*Feb.* 2.—Dr. Olinthus Gregory, the mathematician died at Woolwich, aged 68 years.

*Feb.* 10.—The union of the two Canadian provinces, was consummated under the name of "The Province of Canada." Kingston, at the head of the river St. Lawrence, is the new seat of Government.

*Feb.* 20.—The ship Governor Fenner of New-York, ran foul of the British steamer Nottingham, off Holy Head, and went down with 122 persons on board, the captain and mate being the only persons saved.

*Feb.* 22.—A fearful land slide occurred in the Commune of Gragnano in Italy, by which 113 persons lost their lives.

*Feb.* 22.—The city of Reggio in Calabria, the southern province of Italy, was nearly destroyed by an earthquake. The inhabitants had taken refuge in Naples and Messina. The shocks were fifteen in number, and such of the houses as were not thrown down were for the most part, rendered uninhabitable. We find this account in an English paper, but have not seen the details of the disaster. Under the head of "Earthquakes in 1840," in our 1st No. this unhappy district of country has already been referred to as subject to these appalling visitations.

*Feb.* 26.—Mynyard House, the splendid mansion of the Marquis of Londonderry, who was in Italy, was consumed by fire. Loss from £300,000 to £400,000, or from one million and a half to two millions of dollars.

*March* 29.—Reschid Pacha, the Turkish Minister of Foreign affairs was dismissed and Rifaat Bey appointed in his place. The Minister of Commerce, Fethi Achmet Pacha, was also dismissed, and Said Pacha, brother-in-law of the Sultan, appointed to succeed him. Reschid Pacha was favorable to reform in the internal administration of Turkey, and his downfall is on that account to be regretted, though his successor is understood to be more friendly to an amicable adjustment of the difficulties between the Sultan and Mehemet Ali.

The month of April, 1841, has been marked by a large number of the most distressing shipwrecks and accidents on record. Among these, is the brig Minstrel from Limerick to Quebec, lost by striking upon Red Island Reef. Of the passengers and crew, 8 were saved and 148 perished. The ship William Brown from Liverpool to Philadelphia was lost by striking an iceberg. The following account is from Galignani's Messenger:

"The ship was of Philadelphia; her company consisted of seventeen persons, and she had sixty-five steerage passengers, nearly all Irish, with a full cargo on board. She had a rough passage out, and struck against a field of ice at 9, P. M. when going under all sail, at the rate of ten knots an hour, in lat. 43 deg. 40 min. north, and long. 43 deg 39 min. west, by account. She stove in her larboard bow, and within two minutes struck another field of ice. The ship soon began to fill, and the Captain and crew got out the boats, which were cleared away at eleven. At midnight, the ship went down, and the thirty passengers who could not be taken into the boat, were drowned in her. The boats lay by each other till five, A. M. when the Captain in the cutter steered for Newfoundland. The long-boat, being very heavily laden with so many persons, forty-two in all, could not be managed, and was obliged to steer to the south. At night, she fell in with more ice, and the wind came on to blow hard, the boat began to leak badly, and shipped a good deal of water. Finding she was likely to sink, the mate consulted with the crew, and it was deemed necessary to throw over such of the passengers as were nearly dead. Sixteen were then thrown into the sea and perished; while the rest were nearly stiff with the extreme cold. Shortly after, a ship hove in sight, and the captain who was up aloft looking out for ice, saw the boat and stood for her at the imminent risk of his own safety. This proved to be the Crescent, and they were received with the greatest humanity and kindness on board."

Besides other shipwrecks of a similar nature, several vessels have foundered at sea from coming in contact with others. Among these are the British ship Paragon, sunk by running foul of the Packet ship Susquehannah, and the brig Mary Scott run down by the ship Brooklyn.

*May* 8.—Espartero, the distinguished military leader, was elected sole Regent of Spain, during the minority of Queen Isabella.

*May* 17.—A large mass of Cape Diamond at Quebec, gave way, and fell two hundred and fifty feet upon the houses under the cliff. Twenty-six persons were dug out dead, twenty-two have been saved, and six have not been found.

*British Corn-laws.*—The most important intelligence from England by the late arrivals is the proposition of the British Ministry to adopt a fixed duty on imported grain. Under the established system the rate of duty is fluctuating. It diminishes in a fixed ratio, as the price of grain increases, and rises with the fall of price. The ministers now propose to fix the duty at 8*s.* stg. per quarter (8 bushels) of wheat, or 24 cents per bushel, taking the pound sterling at $4.80, and the shilling sterling at 24 cents; 5*s.* stg. per quarter of rye; 4*s.* 6*d* per quarter of barley; and 3*s.* 4*d.* per quarter of oats. They also propose to diminish the duty on imported sugars, and to augment the duty on the timber of the Canadas, the effect of which will be to promote the importation of timber from the Baltic.

The principal part of the nobility, who are the great land holders of the kingdom, are adverse to the proposed change in the duty on imported grain, and the shipping interest is equally hostile to the increase of the duty on Canada timber. Against this opposition the ministry will be sustained by the great body of the people, to whom high duties, particularly on the necessaries of life, always bring an oppressive burden; and that their policy will triumph, even though they themselves should be borne down for a time, we cannot doubt. The aristocracy of the kingdom are not united in upholding existing abuses. More than one of the nobility are willing to do justice to the great mass of their countrymen. We marked some months ago in an English paper the following sentiment, expressed by the Earl of Radnor on this subject, intending to use it at a proper time:

"I am very desirous my opinion should be known, that the corn-laws are injurious to all classes—to the agriculturists as well as the manufacturers—to the yeomen and the landlords too, as well as the laborers. I have no doubt whatever that they injure every interest and every class, and benefit no one excepting now and then a gambler or a shrewd speculator; and I shall be always ready to lend a helping-hand to their repeal."

It is exceedingly gratifying to see a ministry, which has certainly been singularly successful in administering the external affairs of the British Empire, taking ground in favor of a relaxation of the restrictive system, and making a first step towards that free interchange of products, which, all classes of thinkers admit, is for the common interest of nations.

## STATISTICS.

The number and class of vessels built, and the tonnage thereof, in each State and Territory of the United States, for the year ending on the 30th September, 1839.

| STATES. | CLASS OF VESSELS. | | | | | Total number of vessels b'lt | TOTAL TONNAGE. |
|---|---|---|---|---|---|---|---|
| | Ships. | Brigs. | Sch'ers. | Sloops. | Steam-boats. | | Tons. 95ths |
| Maine,..... | 26 | 48 | 68 | | 3 | 145 | 27,705 60 |
| New-Hampshire,..... | 5 | | 2 | | | 7 | 2,786 51 |
| Massachusetts,..... | 31 | 41 | 100 | 1 | | 146 | 24,446 30 |
| Rhode-Island,..... | 2 | 4 | 2 | 1 | | 9 | 1,496 32 |
| Connecticut,..... | 1 | 1 | 17 | 16 | | 35 | 2,771 11 |
| New-York,..... | 10 | 7 | 26 | 46 | 17 | 106 | 17,951 44 |
| New-Jersey,..... | ..... | 1 | 37 | 24 | 10 | 72 | 6,709 75 |
| Pennsylvania,..... | 4 | 7 | 14 | 13 | 11 | 49 | 6,283 37 |
| Delaware,..... | ..... | ..... | 9 | 7 | | 16 | 1,221 05 |
| Maryland,..... | 3 | 7 | 114 | | 5 | 129 | 13,093 53 |
| District of Columbia, | 1 | ..... | 1 | 10 | 2 | 14 | 1,215 26 |
| Virginia,..... | ..... | ..... | 9 | | 1 | 10 | 896 31 |
| North-Carolina,..... | ..... | ..... | 23 | 2 | | 25 | 1,349 27 |
| South-Carolina,..... | ..... | ..... | 3 | | 1 | 4 | 442 70 |
| Georgia,..... | ..... | ..... | 2 | | 5 | 7 | 873 10 |
| Ohio,..... | ..... | ..... | 2 | | 42 | 44 | 6,592 40 |
| Tennessee,..... | ..... | ..... | ..... | ..... | 3 | 3 | 497 05 |
| Alabama,..... | | | | | | | |
| Mississippi,..... | | | | | | | |
| Louisiana,..... | ..... | ..... | 6 | 1 | 4 | 11 | 862 13 |
| Kentucky,..... | ..... | ..... | ..... | ..... | 11 | 11 | 2,101 50 |
| Missouri,..... | ..... | ..... | ..... | ..... | 5 | 5 | 939 00 |
| Michigan,..... | ..... | ..... | 3 | | 4 | 7 | 883 22 |
| Florida,..... | ..... | ..... | 1 | 1 | 1 | 3 | 180 82 |
| Total,..... | 83 | 89 | 439 | 122 | 125 | 858 | 120,988 34 |

## AGENTS.

New-York City—Israel Post, 88 Bowery.
Utica—Isaiah Tiffany, Genesee-street.
Buffalo—W. B. & C. E. Peck.
Boston—W. H. S. Jordan, 121 Washington-st.
Oswego—E. W. Clarke.

TRAVELLING AGENTS

John H. Allen, of Auburn.
William Stoughton, of Brockport.

ERRATA.—No. 1, page 10, line 11, for *composition* read *consumption*.

No. 2.—The Bude Light, erroneously credited to T. Romeyn Beck, was extracted from Chambers's Edinburgh Journal.

# Editorial Notices.

☞ In order to meet the unforeseen demands which might be made on us by subscribers for the back numbers of the Northern Light, the three first numbers have been stereotyped. Hereafter it is not our intention to do more than to print a few hundred beyond the number necessary to supply our subscribers. All subscribers, who send in their names to us before the 15th of July, can be furnished with the numbers from the commencement of the publication, together with No. 4, which will be published on that day.

☞ Our publication day has been unavoidably changed to the 15th of each month.

## NEW PUBLICATIONS.

ANTHON'S CLASSICAL DICTIONARY—*Harper & Brothers, New-York.*—This is unquestionably one of the great literary labors of the day—a massive octavo volume of more than 1400 pages, consisting of original matter. Prof. Anthon is well known in the literary world, through the numerous classical publications which he has edited, and the texts of which he has illustrated and enriched by critical notes. In his last work, he has given evidence of scholarship, learning and research, on which he may be well content to rest his fame. There is no other of the same character, which can enter into comparison with it in these respects; and it must inevitably take the place of its predecessors in the libraries of literary men. The country has reason to be proud of the learned professor, and of his literary reputation.

INTRODUCTION TO THE LITERATURE OF EUROPE IN THE 15TH, 16TH AND 17TH CENTURIES, by HENRY HALLAM—*Harper & Brothers, N. York.*—Mr. Hallam commences his first chapter with an account of the loss of ancient learning, after the fall of the Roman empire, passes rapidly to its revival in the seventh century, and traces its progress to the beginning of the fifteenth. From this point, his sketch of the condition of literature and of the auxiliary arts, to the end of the seventeenth century, is full and complete, embracing not only what is ordinarily understood by the term literature, but also mathematical and physical science. This work is written with the accustomed ability of the author, and it fills an important space in the literary history of Europe.

THE NESTORIANS, OR THE LOST TRIBES, by DR. ASAHEL GRANT—*Harper & Brothers, New-York.*—The principal object of this work is to show the identity of the Nestorian Christians with the ten lost tribes of Israel, who have been identified by some writers with the Afgahns of India, and by others with the aborigines of America. Whatever may be thought of Dr. Grant's success in supporting his position, it cannot be denied that he has brought a vast deal of interesting evidence to his aid. His account of his communications with a part of Asia, of which we know little, is very entertaining and instructive, and will amply repay the perusal

POWHATAN, a Metrical Romance, in seven cantos; by SEBA SMITH—*Harper & Brothers, New-York.*—Powhatan was one of the most distinguished chiefs of the aboriginal races on this continent. When the English landed in Virginia he was sixty years of age, and was enjoying in peace and quietude the successful results of a life of active and energetic exertion. Foreseeing in the presence of these strangers the overshadowing and final extinction of his own race, he rallied his followers and made war upon them. Mr. Smith takes up the history of the warrior chief at the landing of the English, and pursues it to his final overthrow, sketching some of the most interesting incidents of the contests between the early Virginia colonists and their Indian adversaries.

THE PRINCIPLES OF SCIENCE APPLIED TO THE DOMESTIC AND MECHANIC ARTS AND TO MANUFACTURES AND AGRICULTURE.—BY ALONZO POTTER, D. D.—*Marsh, Capen, Lyon & Webb, Boston.*—This is a work written in a popular style, on subjects of the greatest value to Americans, and especially to the young men of the United States, who have a life of exertion before them, on a theatre abounding in opportunities for the application of their intellectual and physical powers, and on which every thing is in a cause of active development. In our 2d No. under the politico-economical head, we gave a brief extract from this work, which was kindly furnished us by its able and learned author in the proof. Since then the work has been published, and we are happy to commend it as embodying in a small compass a great deal of valuable and interesting information on subjects of practical usefulness. Appended to the work is a copious glossary of technical words.

HIGHER ARITHMETIC; BY GEORGE R. PERKINS.—*Bennett, Backus & Hawley. Utica.*—This is a very valuable work. It fills a space, which usually constitutes a portion of more comprehensive treatises, and is admirably adapted to high schools, academies and colleges, for which is designed. Indeed, it is not only exceedingly useful, but interesting, from the manner in which it is got up, and as furnishing matter for practice and discipline to those, who have advanced beyond the common rules of arithmetic.

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